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ORIGINAL ARTICLES.

ILLUSTRATIONS OF COMPLICATED ABDOMINAL SURGERY.

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NO SURGICAL operation may be easier than a laparotomy, and no operation may tax the powers and resources of the surgeon more severely. Neither is it always possible to predict before opening the abdomen the variety or degree of complications that we are to encounter. Apparently the simplest cases may prove the most difficult, and sometimes when we expect to meet complication, we are surprised to find the case one of the simplest. Hence the abdominal surgeon must be prepared for everything, or for nothing, and must meet both conditions with equal presence of mind.

The following cases are selected from my list for the past twelve months, and record *only* the more severe and complicated cases operated upon during that period. Simple cases of abdominal surgery are no longer of interest, save in making up statistics, and therefore in this list they are passed over.

Case I.—Mrs. M., aged forty-three years. Multipara. History of pelvic peritonitis, dating from last confinement ten years since. Cervix badly lacerated, os eroded, uterus large, and bound in retroflexion with adhesions. Ovaries large, especially the left, and exceedingly sensitive to touch. Tubes also enlarged, menstruation profuse, with greatest suffering before the period. Laparotomy advised, but refused. In the hope of affording some relief to the heavy and large uterus, I made Emmet's operation on the cervix. Recovery was prompt, and for a short time was followed by relief from the pelvic suffering, but when I returned from Europe the following Fall—1889—I found the condition even more aggravated than before the operation. There was constant pain in the left side, and menstruation was so profuse as to render her almost dangerously anæmic. I therefore removed the appendages. This patient, naturally rather yielding, my assistant, though a practical anæsthetizer, could not completely bring under the influence of either chloroform or ether. The abdominal walls remained tense and rigid during the entire operation, and she screamed, saying I was killing her, from the time I made

the abdominal incision until I put in the last stitch. Hence the intra-abdominal manipulations, which under the most favorable conditions for operating would have been difficult, were rendered additionally arduous.

The right ovary and tube were large and adherent, but raised and ligated with comparative care. The left appendage lay firmly imbedded behind the retroflexed and adherent uterus, and to get it out of that position I was obliged to first break up the adhesions of the fundus to the rectum. The ovary and tube with the uterus, formed through adhesions a continuous mass, and I was obliged to separate in every direction, digging the appendage out with my nails. The ovary was about the size of an orange and cystic, containing disorganized blood clots, and pus. The cyst of course broke while separating the adhesions, and the contents flowed into the abdominal cavity. The hemorrhage from separated adhesions was profuse, but controlled by irrigation with hot water. A glass drainage-tube was used, and removed on the fifth day. The fluid, at first blood, then bloody serum, during that time having been thirty ounces. The day after removing the tube, the temperature suddenly rose to 103½, with thirst, nausea, pain in the right ovarian region and restlessness. Menstruation began. A sedlitz powder every four hours until the bowels acted—three were given—controlled the nausea, but the temperature did not return to normal for three days. After that the case was uneventful in its progress towards recovery. She did not return to her house for four weeks, though able to be up and to walk about her room. I would say here that I think patients after a laparotomy are allowed to get up too early. They as a rule feel so well, and the surgeon is anxious to make the case a brilliant recovery, that he dismisses it at the end of the third, or even the second, week. This I believe to be wrong. The operation, however simple it may be, is a severe one for the patient. The adhesions and pedicles require a certain length of time to heal, and until this process is accomplished, the patient can not be looked upon as well. I therefore now confine my patients in their bed for three weeks, even in the simplest cases, and I find that they recover better, and that they get up with less pelvic pain and with more general strength than when formerly I allowed them to rise at the end of the second week, and to return to their home before the fourth week.

Case IV.—Miss S—, aged thirty years. Had

not menstruated for three years. One year ago the abdomen began to increase in size, and a tumor was discovered. For the past two years there had been frequent attacks of peritonitis. Examination showed a large solid tumor occupying the abdomen, and extending up towards and apparently connected with the liver. The tumor was lobulated and presented many symptoms of a uterine myoma. It did not, however, move with the uterus, which was in front of the growth, and as before said there was an entire absence of the menses. I was, notwithstanding these negative signs, rather cautious in my diagnosis, for I have never met with an ovarian tumor that presented so many of the objective symptoms of a uterine solid growth. An incision fourteen inches in length was necessary to get the tumor out of the abdomen, and not until then was I certain with what I had to deal. I then found that the growth was a solid tumor of the left ovary, to which almost the entire descending colon was adherent. The tumor was lobulated, and the portion running up the right side had contracted adhesions to the liver. These adhesions proved the most difficult to manage. The connections with the colon were partly torn and partly tied. Those with the liver were torn, and the raw surface treated with the persulphate of iron. The abdomen was thoroughly cleansed and a drainage-tube inserted. The tube was removed on the third day, thirty-five ounces of fluid having drained through it during that time. The fluid was for twelve hours almost clear blood, but soon became dark and serous. There was much pain, nausea and vomiting. The temperature on the fourth day reached 104 for a few hours, but there were no other indications of peritonitis, and fell gradually to the normal after free actions of the bowels produced by Rubinat water. This water I have sometimes found to act more quickly and better than a sedlitz powder. In some cases the latter seem to cause intestinal disturbance without inducing a movement. I here have found the Rubinat water to meet the requirements.

The rise in temperature in this case I could find no good reason for, and as it was not accompanied with any other symptom it gave me no anxiety. Indeed, I am learning to regard temperature by itself as of less importance than the pulse. My experience leads me to believe that patients who have been subjects of a laparotomy can bear without damage a high temperature for a longer time than they can an abnormally rapid pulse, and my explanation of this is, that these patients, for some reason connected either with the disease from which they suffer, or dependent upon the nature of the operation, are peculiarly liable to heart failure. I am therefore more watchful of the quality and general characters of the pulse than I am of the temperature. Even if the case has passed on to peritonitis, I form my

prognosis more upon the action of the heart. Of course the whole condition of the patient must be considered, and sometimes it is not necessary to take either temperature or pulse; upon entering the room the appearance of the patient is quite sufficient to indicate the probable issue.

Case VII.—Miss H—, aged thirty-four years. Five years ago, when in England, injured herself by lifting a trunk. Since that time there has been almost constant pain in the left ovarian region, and very painful menstruation, followed by great and long lasting prostration. Examination showed the uterus to be firmly fixed in retroflexion and a large semi-fluid mass to occupy the left ovarian region. The pelvic floor was sensitive, even gentle manipulation causing considerable suffering.

Upon entering the abdomen, the left ovary was found to be a thin-walled cyst, adherent in every direction. While raising it, the walls broke, and the contents, a coffee-colored fluid, passed into the abdomen. The hemorrhage from separated adhesions was very profuse, and I was finally obliged to swab out the abdomen with iodine. From this, I have never seen the slightest unfavorable result, and I prefer to use iodine in the place of persulphate of iron, as advocated so warmly by Mr. Tait, when there is general oozing. From iron you are liable to get a very disagreeable discharge, and I think more or less sloughing. There is also danger of touching the edges of the abdominal wound, and this will retard healing. None of these objections can be urged against iodine, and it controls hemorrhage quite as effectively as does iron. If the hemorrhage is from a torn omentum, or if we can see the bleeding spot, and make our applications directly to it, I prefer the iron, for then the action is limited to a small place, but when the bleeding is from a large surface that we can not see, I find better results to follow swabbing over these places with a sponge saturated with tincture of iodine.

The drainage-tube was removed in forty-eight hours, there being at that time no discharge from it. This patient's temperature never rose above 100. She began to menstruate on the second day without pain, and although at times there was considerable wind colic, her recovery was uninterrupted.

Case VIII.—Mary Q—, aged twenty years. A prostitute. Three months before contracted gonorrhœa. Ovaries and tubes enlarged and sensitive. Uterus large and fixed and pelvis floor hard and unyielding. The left ovary was found to be large and to contain two abscesses, the corresponding tube was filled with pus, and the fimbria adherent to the ovary. During the operation, which was not a particularly severe one, save from the great care necessary to avoid rupturing the abscess cavities, the patient, from no apparent cause, suddenly became asphyxiated and ceased to breathe, her heart also ceased acting. The

operation was hurriedly completed and the patient removed to her bed. Artificial respiration was continued for four hours by my assistants, before breathing was at all natural. Edema of the lungs followed and though the temperature never rose above 101° , and that only for a few hours on the second day, this patient barely escaped with her life, but is now a perfectly well woman.

Case XI.—Mrs. G—, aged forty years, a widow, has had two children. For two years has had profuse menorrhagia, and for the past year has flowed continuously. Very anæmic and greatly prostrated. On examination showed a uterine myoma occupying the pelvis and reaching as high as the umbilicus. The patient's condition was such as to render a hysterectomy extremely hazardous. The appendages therefore were removed. This operation for myoma is generally very difficult, but from the shape of the tumor and the low position of the ovaries, the necessary manipulation was in the present instance rendered especially so. I was finally obliged to turn the uterus and tumor out of the abdominal cavity before it was possible to apply the ligatures to the pedicles. The left ovary was the most difficult to raise because of its size and adhesions. It contained a cyst filled with blood, which broke as I was taking it out. The abdomen was thoroughly irrigated, and closed without drainage. The highest temperature, 101 , was reached on the fifth day, but remained at that point only a few hours. On the second day there was quite a profuse vaginal flow, which continued for three days. Since then, nine months, there has been no return, and the patient has rapidly gained in health and strength. During the second and third weeks the temperature ranged from 99° to $100.2-5$ without apparent cause, but her pulse continued normal in frequency and quality.

Case XII.—Miss S—, aged thirty-eight years. For the past two years menstruation had grown more profuse, and the intervals between the periods had become shorter. The only discomfort complained of was the excessive weakness and prostration that followed each menstruation, and at times a feeling of distention of the abdomen. A solid tumor was found to completely fill the pelvis and lower part of the abdomen, and to extend well into the left side. The uterus lay behind the growth, and was closely adhered to it. The peculiar throbbing of the branch of the uterine artery that passes to the cervix was well marked.

The abdominal incision extended from the pubis to three inches above the umbilicus. Let me say here, in reference to so low an incision, that I prefer the low incision in all laparotomies done upon the internal genital organs. The advantage so gained in reaching the appendages is very great, and the danger of wounding the bladder is done away with, if we open the abdomen between forceps.

The tumor in this instance was a multiple nodular myoma, that was wedged in the pelvis below the sacrum so firmly that I feared I would be obliged to remove it in sections. But, finally, by using several corkscrews, and thus changing the direction of the force applied, the enormous mass was delivered. With it came the colon and the bladder. The separation of these proved a most difficult matter and was accomplished only after much careful tearing and pressing. Both appendages were found somewhat adherent. There had evidently been so much peritonitis that the uterus could not be enucleated, I was, therefore, obliged to include the broad ligaments in a clamp—Tait's. The abdomen was thoroughly irrigated, there having been considerable hemorrhage from separated adhesions, and the wound closed around the stump, care being taken to bring peritoneum in contact with peritoneum.

The patient's temperature never rose above 101.5° and pulse never above 106° , and this only for one day. My assistant removed the clamp on the eighth day. There was some perfectly healthy pus in the wound, which was dressed with glycerine and carbolic acid. The wound was entirely healed in one month after the operation.

*Case XV.**—Mrs. D—, aged thirty-nine years, had had several attacks of pelvic peritonitis and one miscarriage. For two years she had been confined to her bed. There was constant ovarian pain, aggravated before menstruation and before a foul smelling, bloody discharge took place from the uterus. The uterus was firmly fixed in retroflexion. The vaginal roof hard and resisting, and the left side of the uterus occupied with a semi-fluctuating body, pressure upon which was followed by the ill-conditioned discharge above referred to.

Upon opening the abdomen universal adhesions were found to exist. The omentum was glued, not only to the parietal peritoneum, but to the underlying intestines. The right appendage was covered by the retroflexed uterus. In the place of the left ovary there existed a tumor about the size of a small cocoanut. I have never found adhesions so dense, or the relations of organs more difficult to define. I could not enucleate the cyst, its walls being the broad ligament. I, therefore, emptied its contents, which were of the same general character as the uterine discharge, and drained through the abdominal walls. No left ovary could be found, the contents of the cyst having probably found its way into the uterus through a fistulous opening, as it seemed to have no connection with the Fallopian tube. The hemorrhage from separated adhesions was profuse, necessitating the use of iodine. The patient recovered perfectly, without after complications.

Case XVI.—Miss S—, aged thirty years. For about eighteen months had suffered much

* This case was reported in the Times for December, 1890, page 271.

pain in back and ovaries. During menstruation, the sufferings were greatly increased. She could no longer follow her occupation, which necessitated almost constant standing. Her condition was also one of intense nervousness, so that her friends feared that she would soon become insane. The uterus was found quite normal, but the ovaries hard and extremely sensitive. The tubes were convoluted. As every other treatment had failed, I proposed removing the appendages, a proposition that was gladly acceded to.

The operation presented no special complications, and her recovery from its immediate effects was prompt and complete. The interest centers around the difficulty encountered in getting the bowels to act, and the unusual suffering caused by their torpid state. The abdomen was greatly distended and was tympanitic, but without the slightest sign of peritonitis. The gas would neither pass up or down. Sedlitz powders, sulphate of magnesia, by mouth or rectum, produced no effect. The long tube in the rectum gave no relief. Fortunately, the stomach remained unaffected, and I was able to ring the changes on cathartics and purgatives. What finally caused the bowels to act, I can not say, probably it was the accumulated effect of the numerous measures used. The whole condition caused me anxiety, and was difficult to understand in view of the great care I always employ in thoroughly cleansing the intestinal canal before a laparotomy. To this precaution I attribute much of my success in the after treatment of these cases, and the absence of stomach complications which I usually am able to record. It is very rare for my laparotomies to suffer either from nausea or from more than very temporary inconvenience from inactivity of the bowels.

Case XVII.—Mrs. L—, aged forty-five years. For two years had observed an increasing enlargement of the abdomen. During that period there had been a very marked loss of strength. There was much abdominal pain, and general discomfort. Profuse menstruation, with almost continuous flow. Before consulting me, her case had been diagnosed "inflammation of the womb," and as such treated locally. I found a uterine myoma. The adhesions and remains of peritonitis were so extensive that beyond this very evident diagnosis I could not advance.

Upon opening the abdomen the difficulties to be overcome became apparent. The omentum was adherent everywhere, and intestines were glued to the tumor. After freeing these, I found the ovaries slightly enlarged and adherent, and hydrosalpinx to exist on both sides. Each tube measured at least three inches in diameter. This condition did not especially complicate the operation, for of course I punctured the thin sac, but even this was adherent, and its separation caused profuse hemorrhage. The left appendage was ligated separ-

ately, and the uterus and tumor enucleated and secured with Tait's clamp and pins. I used iodine freely in the abdominal cavity, and placed a drainage-tube at the side of the stump. For twenty-four hours there was a considerable quantity of blood from the tube, but not enough to cause anxiety. But from the beginning the heart had been feeble, and no stimulants or treatment produced the slightest effect upon it. She died, apparently of heart failure thirty-six hours after the operation.

This patient, judging from every indication that justifies a hysterectomy, should have recovered. For while the complications and difficulties of the operation were considerable, her general condition was apparently good. The operation was done in thirty-five minutes. She recovered from the anæsthetic well, and save for the feeble heart, which manifested itself almost before the operation was completed, had no unfavorable symptoms until about six hours before she died.

Case XX.—Mrs. S—, aged twenty-four years. Four months before consulting me was delivered of a still born child at eight months. During the last months of pregnancy is said to have had Bright's disease. At the time of coming under observation, the urine contained a small percentage of albumen, but no casts. Septic peritonitis followed confinement, from which recovery was slow. Pain and swelling in the left ovarian region has been constant. There have been no chills, but profuse night sweats, with sub-normal temperature and pulse ranging from 100 to 120. During the past month she has been losing flesh and strength rapidly.

Examination showed the uterus rather large and flexed to the right side by a cystic ovary lying on the left side. The pelvic floor was not unyielding as one would expect from the history of the case.

Upon opening the abdomen, the condition found was very peculiar. The tumor was a multilocular ovarian cyst, the largest cavity being filled with pus, estimated at about two quarts. A firm and large adhesion to the omentum existed, the principal artery of which was the size of the radial artery. A very peculiar feature of this case was the pedicle. This was long, and had passed around behind the uterus, thus the right ovary which was the one diseased lay, together with the left ovary, on the left side. I was obliged to tie the pedicle before separating the adhesions.

The complications in this case arose in connection with the after treatment. The wound healed by first intention, save at the site of the drainage-tube, which was removed on the fourth day; but an enormous abscess formed in the abdominal wall, I used the persulphate of iron in this case, and I was obliged to re-open the wound for its discharge and drainage. During the maturing of the abscess and for several days following, the

stools were of such an offensive odor and typhoid character, that I was almost inclined to believe that the intestinal canal was involved or that I had to deal with a case of septicæmia. When profuse suppuration is progressing, we frequently have as a complication stools approaching this character, but I do not remember to have encountered anything quite as pronounced as in this instance. The case, however, progressed to a favorable termination, convalescence being prolonged only about two weeks beyond the usual period.

Case XXIV.—Mrs. De L—, aged forty-five years. Highly hysterical. Several children, the youngest fourteen years old. Menstruation profuse and irregular. Constant pain in both ovaries, much of the time so severe as to prevent the erect position, and always to interfere with walking.

Examination showed the tubes to be dislocated behind the uterus and to be very sensitive to pressure. The ovaries were hard and rather small. Vaginal vault unyielding, and uterus fixed in retroflexion.

As was to be expected, adhesions existed everywhere. These were broken up with considerable difficulty, but the principal difficulty was encountered in digging out and raising the tubes. These lay together behind the uterus and were literally dug out of a mass of tissue, the result of former peritonitis. Each tube contained a considerable quantity of pus, but neither was occluded. The hemorrhage was profuse, but irrigation and swabbing with iodine controlled it sufficiently to enable me to close the abdomen, after inserting a drainage-tube, which was removed on the fifth day. Mrs. De L— began to menstruate on the second day after the operation. My experience has led me to look rather favorably upon the occurrence of menstruation soon after removing both appendages. I have never seen any ill-effects from it, but on the contrary, have thought that it assisted in relieving pelvic congestion and the pain that frequently follows the operation. Though this may not be borne out by further observation, I have also thought that those patients who menstruate once or twice after removing their appendages, do not suffer as much from the usual symptoms attending the change of life.

Case XXV.—Miss F—, aged forty years. Right lung contains very evident marks of former active tubercles, and previous history confirms the pathological condition. Heart feeble and irregular. For several years there has been profuse menstruation, with constant pain in the left ovary. About seven years before consulting me, a particularly severe attack of pain was followed and relieved by a profuse discharge of blood and pus from the rectum. This has not recurred. Examination showed a swelling on the left of the uterus, apparently connected with it, but as the left ovary could not be distinguished, I concluded that the swelling was that ovary.

Upon opening the abdomen, the left ovary was found to lie to the left of and behind the fundus. It was about the size of a large orange, had exceedingly thin walls, and was filled with chocolate colored fluid. The tube was also enlarged, and both ovary and tube was densely adherent to the rectum and pelvic peritoneum. The right ovary was in a healthy condition. The separation of adhesions was attended with much difficulty, and necessitated rupture of the cyst, with of course the flow of its contents into the abdominal cavity.

I have never known hemorrhage more difficult to control than this was. At one time I feared I would be obliged to turn out the intestines and secure the bleeding points. But several applications of iodine finally succeeded in preventing this. The shock was most profound. Several times during the operation, which, however, lasted only thirty minutes and most of that time was consumed in controlling the hemorrhage, it became necessary to resort to artificial respiration, and to give enemata of beef tea and brandy.

She was returned to bed more dead than alive, and for twenty-four hours her condition was one of such profound depression that the chances of recovery seemed very slight. Her condition was rendered more unfavorable from the fact that for nine days she could retain nothing, not even one spoonful of medicine on her stomach, but vomited constantly. She thus became reduced to the lowest possible ebb, for the rectum soon became so irritable that I was obliged to lessen the quantity of nourishment given in that way. I have never met with such persistent nausea and vomiting after a laparotomy. Nothing in the way of medicine or food served to ameliorate the condition. The first food she retained was the "Liquid Peptonoids" of Reed & Carnrick. This preparation I have found of value when a highly concentrated and easily digested food is required. In many laparatomies I have found it of inestimable service. As soon as the stomach was able to digest, Miss F— began to improve rapidly, and, though compared with other cases, her convalescence has been rather slow, she is now, eight months after the operation, quite well and strong and entirely free from the constant pain she suffered after the operation.

Case XXVIII.—Mrs. F—, aged thirty-three years. Gave a history of rapid child bearing and of peritonitis of about one year ago. The pain and suffering were constant and extreme, and of such a degree as to confine her to her bed for weeks at a time. The digestive organs suffered secondarily, and she was unable to digest the simplest kind of food. The uterus was fixed, and both appendages lay very low in the pelvis. The tubes were convoluted, and the ovaries large and cystic.

As to her general health, I have rarely oper-

ated upon so unfavorable a subject. Because of the condition of her stomach, it was impossible to prepare her for the operation, a preliminary treatment of which she was much in need. So weak was she that she was carried into the operating room.

Upon opening the abdomen, I found well marked evidence of the inflammation that formed a part of the history of the case. The ovaries lay very low, and the tubes twisted in an unusual manner. The ovaries were cystic and the tubes very thick, the right fimbria being adherent to the corresponding ovary. Both appendages were embedded in a mass of inflammatory products, and were dug out with great difficulty. One anatomical feature of this case made it an unusually difficult one to operate upon. The Fallopian tubes were so short, and the broad ligament so much contracted, that I found it almost impossible to make my pedicle. I could not do this outside of the abdomen, and was, therefore, obliged to apply my ligature deep in the pelvis and without the aid of sight.

The progress of this case has been most interesting. Almost from the moment that the appendages were removed, and before Mrs. F— had recovered from the anæsthetic, she showed indications of improvement. She had neither nausea nor vomiting, and her only complaint was that I did not give her enough to eat. Her stomach has recovered its tone, and before she returned to her home she was able to eat and digest almost every thing.

Case XXIV.—Mrs. S—, aged twenty-five years. Has been married two years but never pregnant. Before marriage painful menstruation. Husband had gonorrhœa about one year before marriage, but believed himself cured, though at times noticed a slight watery discharge from the urethra. For one year or more there had been much pain in the left ovary, which had gradually increased to such a degree as to render walking or any exercise difficult. Six weeks before consulting me Mrs. S— had an attack of what was said to have been dysentery, though I am doubtful as to the true nature of her illness. Latterly there had been night sweats, with elevated temperature. Examination showed a large doughy mass in the left ovarian region, with the uterus anti-flexed and low in the pelvis. The mass was exquisitely sensitive to any pressure, and an examination was always followed by an aggravation of the local suffering.

Upon opening the abdomen, I found the omentum a mass of tubercles, and both appendages to be buried in the same tissue. While examining the left side, for the purpose of determining what I could do, and using less force than I frequently use in separating adhesions, I tore the descending colon almost completely through. At this time, chancing to look at the patient's

face, I saw she was asphyxiated. Artificial respiration was resorted to, and after about ten minutes breathing was sufficiently restored for me to proceed with the operation. I sewed the intestines with Lembert sutures, and after thoroughly cleansing the abdomen of fecal matter, placed strips of iodoform gauze about the wounded intestine bringing their ends out of the abdominal wound to insure drainage. My idea in so placing the gauze was to form a sinus in case the gut did not heal—and I feared it would not from the almost degenerated state of its tissues—and thus prevent fecal infiltration.

The shock was profound, and the abdominal pain more severe than I have ever before encountered, indeed, I was obliged to depart from my rule and give morphine. Nausea and vomiting continued for five days, and for over one week the temperature was subnormal, with a pulse of 130° to 140°, a particularly unfavorable ratio. There was, however, but little tympanitis. The bowels remained obstinately constipated. Nothing but large enemas of ox-gall produced any effect, and these increased the pain and nausea. Sedlitz powders were generally vomited and seemed to aggravate the pain without acting upon the intestinal canal.

The gauze drainage was entirely removed on the fifth day, and for a few days it seemed as if the intestine and wound would heal, but on the ninth day, after a night of excessive pain and effort to stool, gas and a little liquid feces passed from the wound. This was the only time that fecal matter was observed. Gas, however, especially when the rectum was full, passed from time to time for four weeks, but the sinus gradually healed and now gives no trouble. The wisdom of using the kind of drainage that I did use was shown by the progress of the case. Had I not given nature a chance to form a sinus between the intestine and the abdominal wound, fecal matter must have found its way into the peritoneal cavity, and have added greatly to the danger of the case, or have brought about a fatal issue.

The results of drainage in this case indicate what may possibly occur when drainage is used in other laparotomies. It was very evident that within a short time, certainly not more than thirty-six hours, the abdominal cavity was completely closed around the gauze, so that drainage existed for a limited portion and not for the cavity generally. This I have come to believe to be the usual behavior of abdominal drainage-tubes, and this belief has, in my hands, considerably restricted their use.

This case, aside from the complications, is of especial interest as showing the ease with which fecal fistulæ heal. It is the first one that has occurred in my practice, but it certainly did not offer much of an obstacle to recovery.

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THOSE RESOLUTIONS OF DR. DECKER'S AS TREATED BY DR. TOOKER.

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IN THE January edition (1891) of THE NEW YORK MEDICAL TIMES Dr. Tooker criticises, under the title—"Some Mistakes (?) of Hahnemann"—some resolutions, which I submitted to the Homœopathic Medical Society of the State of New York, at its Semi-annual Meeting held at Brooklyn last year.

The first resolution passed upon by Dr. Tooker reads as follows:

"Resolved, That, in the opinion of this society, the theory of the psoric origin of chronic diseases, as set forth by Hahnemann in the 'Organon' and in his other writings, is erroneous; and, therefore, as a basis for treatment, it is misleading."

This resolution Dr. Tooker is ready to adopt, for he says, p. 290, "Discard it if you please, or retain it if you will. We have no objection to either course."

The second resolution, which the doctor takes up, is as follows:

"Resolved, That all symptoms attributed to provings with high potencies are of doubtful reliability; and, therefore, they are not trustworthy guides in practice."

Of this resolution, the doctor says, p. 290, "The second resolution is only worthy of consideration because Hahnemann in his dotage and some of his disciples in their early enthusiasm believed it and taught it. As the great majority of the followers of Hahnemann, however, at the present day, have seen its fallacy and have already discarded it, there seems to be no special harm in giving it official and respectful burial in the resolution as formulated."

The above language has no uncertain sound; and the doctor, in thus heartily approving the second resolution, virtually endorses the third resolution, which, however, he criticises adversely.

I can not understand how he can accept the one and reject the other. If he is not a believer in high potencies, then, he can not accept the doctrine of potentiation or dynamization; and that is all the third resolution condemns.

The second resolution deals with provings made with *high potencies*—it declares against them, and so does Dr. Tooker. But, if high potencies are really potentized, according to Hahnemann, then, they are just the thing with which to make provings.

The third resolution is as follows:

"Resolved, That in the opinion of this society the theory of potentiation of drugs, as taught by Hahnemann in the 'Organon' and in his other writings, that is, the doctrine that the more drugs are attenuated by successive triturations, or the more they are diluted and succussed, the more

their power and effectiveness is increased, is hereby declared unsound and unreasonable in principle, except the fact that division of drug matter is accomplished."

This is the resolution which the doctor can not accept; and yet he does indirectly accept it, as before stated.

The above resolution does not reject attenuation or dilution of drugs. The divisibility of matter is embodied in the resolution as an exception. The resolution does not declare that unsound and unreasonable; but only the doctrine of potentiation.

Dr. Tooker seems to lose sight of the distinction between the meaning of the terms attenuation and dilution as compared with potentiation and dynamization when applied to drugs. They are not synonymous terms, and can not be used interchangeably.

I believe in the dilution and attenuation of drugs so far as tangible—so far as the divisibility of drug material goes. I believe, that the more perfectly a drug is attenuated the nearer it approaches to molecular freedom, and the quicker it will be absorbed. All this can be demonstrated. I also believe, that to use drugs homœopathically, they must be more or less diluted or attenuated, so that, when administered, they stop short of evident pathological or physiological effects. The dose to cure must be less than the dose to prove. This is also demonstrable. Now, attenuation, dilution and the perfect divisibility of drug matter is one thing, and the unsound doctrine of potentiation as applied to drugs is quite another thing. The third resolution denounces the latter, but not the former. The third resolution denounces potentiation because it is absurd and unreasonable.

To prove that potentiation of drugs as taught by Hahnemann is false, absurd and unreasonable, I need only refer you to Hahnemann's own statements, viewed in the light of our present knowledge. I refer you to *Hahnemann's Lesser Writings* by Dr. Dudgeon, p. 733, from which we quote the following:

"In the same way liquid medicines do not become, by their greater and greater attenuation, weaker in power, but always more potent and penetrating. For homœopathic purposes this dilution is performed by well shaking a drop of the medicine with a hundred drops of a non-medicinal fluid; from the bottle so shaken a drop is taken and shaken up in the same manner with another hundred drops of unmedicated fluid, and so on. This result, so incomprehensible to the man of figures, goes so far that we must set bounds to the succussion process, in order that the degree of attenuation be not over-balanced by the increased potency of the medicine, and in that way the highest attenuation become too active. If we wish, for example, to attenuate a drop of the

juice of *sundew** to the decillionth, but shake each of the bottles with twenty or more succussions from a powerful arm, in the hand of which the bottle is held, in that case this medicine, which I have discovered to be the specific remedy for the frightful epidemic *whooping-cough* of children, will have become so powerful in the fifteenth attenuation (spiritualization) that a drop of it given in a teaspoonful of water would endanger the life of such a child; whereas, if each dilution-bottle were shaken but twice (with two strokes of the arm) and prepared in this manner up to the decillionth attenuation, a sugar globule the size of a poppy seed moistened with the last attenuation cures this terrible disease with this single dose without endangering the health of the child in the slightest degree."

According to Hahnemann the PROCESS of succussion and trituration develop in drugs, or impart to drugs, more and more power the further the PROCESS is carried on; or the more dilute and attenuated they become by this PROCESS the more actual power and force is engendered; and this force, or power, started in the material, becomes greater as the material becomes less and less; and finally, when the material has passed away, the accumulated power is transmitted or passed over to the spiritual; and that goes on increasing in power *ad infinitum*, if the PROCESS is continued.

According to the PROCESS, Hahnemann believed that, when the spirit world was reached with *drosera* ("the fifteenth attenuation [spiritualization]"), provided each potency had received twenty succussions instead of two from a powerful arm, then it would endanger the life of a child with whooping-cough.

He directed, that each successive dilution should be succussed twice, if more than that, the power would be developed too rapidly, for each and every additional shake meant more power. Hence, in the case of *drosera*, when the point is reached where there is no drug material left—where the body of the drug is all gone, then the spirit of the drug, like the soul of John Brown, goes marching on mighty in its power and deadly in its effects. Now, if this be so, it should be regarded, by the law of the State, malpractice to dispense the so-called high potencies without a label signifying that they are deadly; and it should be generally understood and taught, that a high dilution should be brought low by dilution; but mind you don't shake it. *The only safety in diluting a high potency is in not succussing it.*

Such is the logic of Hahnemann. To-day it is nonsense! folly! delusion! craziness! and there is no danger of killing a child with *drosera* in any dilution. Hahnemann takes us out of the tangible into the spirit world—of which we know nothing; and the nearer we approach to nothingness,

if on the given scale, by jerks, the nearer, he tells us, we approach to something—call it disembodied power, which is a misnomer, a fallacy.

The more material the more power (speaking broadly) is a fundamental principle in Nature and in Art.

A fount, a brook, a river, the ocean.

The acorn, the bush, the oak.

The snowflake, the snows of many winters, the avalanche.

The babe, the boy, the man.

The more material the more power. We can not comprehend or utilize a force independent and separate from material. In all science, in all mechanics, there is no such thing as power without material. This is a self-evident truth, which confutes and confounds and makes a lie of Hahnemann's doctrine of potentiation.

A drug's usefulness, or beneficial influence, may be increased by dilution, but not its power. The less material the less power, on general principles, whether it is succussed or not. Does a tornado become more powerful by dilution? Does a man's arm become stronger by emaciation?

Is the thirtieth attenuation of prussic acid more powerful and deadly, when succussed according to Hahnemann's directions, than the pure acid itself?

Would you drain off the mill-pond, and then run the mill? But—

"The mill can never grind with the water that has passed."

Would you build ponderous suspension bridges with attenuated cables—spiritualized cables? But the Brooklyn Bridge and that at Niagara are not so constructed.

Away with such nonsense!—the non-sense of Hahnemann! Power goes with material and no further. As you lessen material you lessen power; and as you increase material you increase power—true, both in Nature and Art, generally speaking.

Power or potency is one thing; but the fitness, the adaptability of things is something else. A drug, by dilution or trituration, may be better adapted to the cure of disease, it may, by that process, be the better fitted for efficient use by the system; but its power has not thereby been increased; and it does not continue to increase as the material is lessened *ad infinitum*.

There is no such thing as a high potency, because power does not increase with successive diminution of matter, notwithstanding it may have been triturated or succussed. You can not get out of a drug anything more than is in it; and succussion and attenuation possess nothing and give nothing. There is no such thing as a high dilution, for the so-called high dilutions contain none of the original drug material. In order to dilute there must be something for dilution—some material; and, if there is no material, there can be no dilution.

* *Drosera rotundifolia*.

Force or power can not be conveyed or exhibited beyond matter nor without matter; and to claim that it can, or to advance such doctrine, is nonsense; for it is unscientific, untenable, undemonstrable and false. I close with a little prayer—"With all thy getting get understanding." Amen!

THERAPEUTICS OF ACUTE CARDITIS.*

BY PROF. A. K. CRAWFORD, M. D., CHICAGO, ILL.

HAVING a case of excessive serous effusion in the pericardial sac to deal with, every effort must be directed toward reducing this effusion, else the heart will undergo strangulation. The functions of perspiration and urination must be increased in activity, and the demand thus created for fluid not being supplied by the stomach, the lymphatics of the pericardium may thereby be induced to supply the systemic craving from its temporary reservoir.

Such remedies as digitalis, apis or pilocarpin, the alkaloid of jaborandi, may bring about this desirable result, or even helleborus may be rightly brought to mind, from its well-known effect upon serous effusions of the brain. But having tried these remedies, each in accordance with its own peculiar symptoms, and having failed, aspiration of the pericardial sac will stare you in the face, and you must be prepared for it and know how to proceed. Yet you must be aware of the fact that the operation itself, unless most carefully performed, may kill the patient; and the patient must know as well as the doctor that there is but little chance of recovery, even when it is done without accident.

Usually the disease is too far advanced when this procedure is resorted to for the patient to hope for recovery, and, moreover, usually the pericardial effusion is but an expression of a general dropsical condition when it refuses to be absorbed under the administration of well-chosen remedies; therefore there is usually a well developed cachexia, as well as a local disease to combat. With such reasons and such chances against the operation and the patient, why should the measure be attempted at all? First, as a last resort, to save a life; and second, as a means to relieve the patient's suffering. Whether it be a crowded heart or a compressed lung, the result of recent flooding within their serous sacs, no one knows, who has not witnessed it, how much relief comes to such a patient from aspiration.

Having considered all the *pros* and *cons* and determined upon aspirating, you will enter the needle on the left side in the fifth intercostal space, one to one and a-half inches from the central line of the sternum. When the effusion is specially large, the sixth interspace may be chosen as the better place in which to plunge the needle. If

you can locate the apex beat of the heart, your knowledge of cardiac anatomy, normal and pathological, will direct you aright. Nevertheless, it would be advisable to keep in mind that there is a mammary artery to be passed on your way to the pericardial sac, and that the right auricle of the heart is possibly within easy reach of your needle, to puncture either of which would be a fatal piece of work. Having proceeded thus far without mishap, it will depend upon circumstances whether you use the suction pump or simply let the cavity drain. Do not become panic-stricken if what you see appears to be blood ejected through the needle in spurts corresponding with the heart's throbs. This is not necessarily from a punctured heart, although it looks so hideously like it.

The pericardial serum is much more frequently bloody than it is elsewhere, and the pumping action of the heart will force it out in jets when it is sufficiently limpid and not encompassed by adhesions. But the rule will be that the draining process will be best, because the most suitable, and then it will be necessary to let the needle remain *in situ* for half an hour or longer. One case I had, a painter by trade, had reached the point where he could not recline night or day, and general dropsy was far advanced. Submitted to aspiration, and although only a small quantity of bloody serum was taken from the pericardium, he experienced immense relief. The heart acted with more vigor, the pulse became discernible when previously it had been almost extinct; and for some time his nights were not so full of torture, and he had some rest.

There was an old intra-cardiac lesion in this case, and after some weeks it proved fatal. It is quite possible to come across a case of pericarditis, too, where the exudation of lymph has been so far in excess of serum that, even by means of a large needle, or trocar, no fluid can be withdrawn because the fluid there present is held within the meshes of the organized lymph, like honey in the cells of the honey-comb.

Looking over the diseases again, for a moment, which so often precede and give rise to cardiac inflammations, it will be noticed, readily, that outside of rheumatism there is a decided prevalence of states which produce well marked dyscrasie, and this is the reason, without doubt, why *arsenicum* is ever and always dragged into the list of cardiac therapeutics. Not that it has any special business with this organ and its affections, excepting one, a morbid state with which we have nothing to do at present, but that it has much to do with cases of pyæmia and fevers of the puerperal state, and with Bright's disease and the exanthemata. Under such circumstances I have no objection to the arsenic being prescribed, but if you pin your faith to it and think it will specially help the acute cardiac inflammation which has sprung to life, I am afraid you will be sadly disappointed.

* An abstract from *The Olinique*.

When I was a good deal younger than I am now I once advised arsenicum for a case of post-scarlatinal endocarditis, and I pointed out the symptoms so unerringly that two heads much older and more experienced than mine said "let us try it." They knew then what I have since learned, that such a perfect picture of arsenicum means—death.

Such was the termination of the case and such was the termination of my faith in arsenicum in acute carditis. I would simply urge upon you the necessity of backing up arsenicum, when the latter is called for, with a remedy that has a known affinity for the cardiac tissue involved. Besides the general symptoms, always so prominent under this drug, of extreme anguish, nervous restlessness, pallor and debility, you will find the special symptoms leading you to its choice, of palpitation aggravated when the patient lies upon his back, pulse rapid, irregular and even intermittent; a sense of constriction of the chest, which is the fore-runner of cardiac asthma with its train of respiratory difficulties in the forms of dyspnoea, orthopnoea and apnoea.

Iodine is closely associated in most of our minds with spongia, and either may well be kept fresh in mind in cases of cardiac inflammation and exudation because of their powers to bring about absorption. It is a not uncommon belief that because the valve-segments have become thickened and are the seat of exudative vegetation they must remain forever damaged and incompetent to fulfill their function. Iodine has been urged, in a like sense, in pneumonia and where a croupous exudation co-exists with an acute valvular trouble there would be more than sufficient reasons present for its employment.

All the snake venoms act directly upon the heart structures, and therefore there is no reason why any doctor, even though he does not believe in lachesis, for sundry reasons, should abjure this whole class of poisons from his cardiac therapy. There are shades of difference between the indications for naja, crotalus, lachesis, vipera and the rest, but the bulk of the organic constituents of the venoms are, as near as possible, identical.

Now, under lachesis the tendency to disorganization of the blood, and to perturbation of the nervous system are both well marked and pretty evenly balanced; but when the neurotic symptoms prevail naja is the choice, and when the blood changes are most evident, through ecchymoses and hemorrhages, the crotalus is best indicated. Lithium is not very often singled out for a patient with heart disease, but is generally mentioned by authors. The indications given are, "valvular deficiencies, worse from mental agitation, which cause a fluttering and trembling of the heart," and "sudden shocks in the cardiac region."

I will close this imperfect review of the special therapeutics of acute carditis with a few words on

kali. carb. Both from its pathogenesis and its post-mortem records we know positively that it has an affinity for the cardiac structures. Its first cousin, the chlorate of potash, because of its supposed innocuous properties, is much used by people in an indiscriminate way for "sore throat," and consequently we are called upon when a death occurs in a community to state again how injurious the stuff may be if taken without rhyme or reason.

Our kali. carb. is prescribed, and with good effect, in endocarditis, particularly when the mitral valve is the focus of the inflammation, which so readily induces pulmonary stagnation, and thus gives rise to the symptom—"a loud click of the pulmonary artery is heard." But the ever-recurring and characteristic symptom of this remedy is the stitch-like character of the pains. "Stitches about the heart and through to the scapula." And the pulse, unequal, irregular or intermitting, is more rapid in the morning than in the evening.

As to belladonna, veratrum, phosphorus and many more remedies, they must be considered more in the light of adjuvants to the pronounced cardiac remedies, or as intercurrents when special symptoms or conditions outside the heart call for them.

THE TREATMENT OF PNEUMONIA.

BY EGBERT GUERNSEY, M. D.

DURING the past winter pneumonia has not been unusually prevalent in this city, and yet, as in every winter, there have been many cases where the attack has been sudden and the disease run to a fatal termination in a very few days. It was while watching one of these sudden and sharp attacks of pneumonia in a gentleman of fifty years, whose lung power a few years ago had been much weakened by a severe and protracted attack of pleura-pneumonia, leaving adhesions, I had the pleasure of meeting a distinguished teacher, writer, and specialist in chest troubles in consultation. After a careful inspection of the chest, he defined very clearly the condition of the lung as it evidently existed, and predicted a probable fatal termination. As to the treatment, he said, "Absolute rest, ample support, and that is all; for I do not believe any known drugs have any effect in controlling the disease." He then quoted a paper read before a medical society, in which the author presented, in the form of a chart, the progress of the disease as tabulated in a large hospital for seventy-five years. During this period every known practice of treatment which had gained favor in the profession had been tried, and the result was almost a straight line on the chart. No matter what the treatment, the result, as indicated by this chart, was about the same.

I presume that every physician has felt in very

many cases of pneumonia that all his efforts to relieve have been without the slightest effect, and he has been compelled to watch with intense humiliation the steady progress of the disease to a fatal termination. Possibly the better understanding we are obtaining of the cause of ptomaines and the deadly poison of the work of bacillus and bacteria may enable us in the no distant future to control even this class of hitherto fatal cases, but I think there is no question but what many cases of pneumonia are materially shortened and even switched off from the downward track by well-selected remedies.

The case under consideration, for instance, which drew forth the doubt of my medical friend, that there was any value in drugs in the treatment of pneumonia, and that if nature could not carry them through the attack with the aid of entire rest and abundant support in the way of stimulants and food, showed, I think, the positive action of drugs, and that in the right direction.

The patient was aroused from his sleep about four in the morning with a violent chill followed by severe pains through the right side of the chest and a hot fever. At twelve the next day the pulse was 120, the temperature 105, the respiration very painful and 40, the face flushed. Even at this early stage, the whole lower half of the right lung was involved and the outlook not by any means bright. A mixture of turpentine and vaseline was spread over the entire lung, and the entire chest covered with an oil silk jacket. Aconite and bryonia were given in half drop doses in alternation, half an hour apart. The next day the temperature was about the same, the respiration, however, was less painful and the pulse had lost somewhat of its sharp inflammatory twang. Tartar emetic, a grain to four ounces of water to which was added ten drops of aconite, was alternated in teaspoon doses with bryonia as before, and ten grains of phenacetine given with instructions not to allow the temperature to rise above 102. The next day there was a free expectoration of the characteristic rusty pneumonic sputa, respiration thirty and temperature 101½. The phenacetine was given in preference to antipyrine on account of their being less danger of undue depression of the heart. With the temperature kept below 102, free expectoration encouraged, the inflammatory action seemed to be kept well in hand through the second stage till the third or stage of resolution was reached. The remedies during the first and second stage were aconite, rhus, bryonia, baptisia, veratrum vir. and tartar emetic. During the second stage, if the expectoration was scant and difficult it was encouraged by grain doses in water of iodide of potash. At the setting in of the third stage, and not till then, in my experience phosphorus becomes an important remedy, and this drug, aided by mercuries, china, or quinine, and perhaps mu-

riatic or phosphoric acid with ample support and entire rest will generally carry the patient through, in curable cases, the stage of resolution to complete convalescence.

The idea is to keep down inflammatory action as much as possible in the first stage, to steer carefully through the second stage aiding rather than checking expectoration, and in the third stage by gentle specific stimulating the lung tissues and general support aid in producing a healthy and complete resolution.

Of course, during the entire progress of the disease, the bowels should be kept moderately open and the action of the heart carefully watched. A weak heart's action often needs digitalis and alcoholic stimulants. Alcohol, however, should be given promptly when needed, but with as much care as any drug. While we should avoid the toxic effect of alcohol, there is but few acute diseases where there is as much tolerance shown for it as in pneumonia. In the early stage alcohol is seldom required, but when the pulse and the first cardiac sound at the apex show a flagging heart, alcohol is distinctly called for and should be given in such quantities and with such frequency as to produce a marked effect upon the circulation. This effect, however, should be carefully watched and the stimulant increased, diminished, maintained or omitted entirely according to the conditions present in each case. The effect of alcoholic stimulant upon the heart's action is often wonderful, diminishing the frequency and increasing the tone of the pulse and relieving the patient of that intense weakness and depression which unless controlled might speedily end in death. The cold perspiration, which often follows the permanent lowering of the temperature, is often relieved by sponging the body with a weak solution of nitromuriatic acid or quinine in alcohol and the internal administration of china, quinine or arsenic.

A treatment similar to this has in my practice been followed with such good success that it seemed to me the action of remedies was plainly apparent. There is no question, however, that in pneumonia, as in every other disease liable to run a quick course, we occasionally see a case which no known medical treatment has any power to control. Such a case came under my observation a few years ago. A gentleman returned home from a long financial trip, every step of which had been attended with the most intense mental strain and great physical fatigue, and was immediately confined to his bed with a severe attack of rheumatic fever. He was slowly convalescing, the fever and pain had entirely subsided and he was able to walk about the room, when one morning I noticed an increased temperature, a quicker breathing, and in the lower portion of the right lung a well-marked pneumonic condition. Until the disease terminated in death thirty-six hours later it marched steadily and rapidly on, involving

both lungs, his mind remaining clear until a few moments of his death. I do not believe in this case there was any drug in our repertory of medicines or any treatment known to science which would have produced the slightest effect in checking the progress of the disease for a single hour. The nature of the poison, which here as in scarlatina and diphtheria sometimes work with such lightning-like rapidity, it will be, I hope, for the future triumphs of science to disclose and remedy.

A DIGEST OF PHTHISIS PULMONALIS.

By FRED. W. HART, M.D., ST. MARTINSVILLE, LA.

THE interminable extortions imposed on the unfortunate sufferers with consumption, the delusive literature in the interest of the sale of nostrums, urges me to submit to the profession the following digest, that by some circumlocutory mode may benefit the victims.

The vital forces of the economy are sensation and motion. Sensation sets to work the faculties of the intellect, the nervous and vascular systems of the economy, it expresses the temperament of the individual, which varies from the plethoric to the anæmic, like so many links of a chain. From health those same variations account for the greater or less susceptibility to disease, and for the variations of the progress of the same disease. Many escape small-pox and yellow fever when epidemic, and many that are in continual attendance on and SLEEP with the phthisical ESCAPE consumption, the constituents of their solids and fluids being incompatible with and can not be impregnated with those diseases. Our interest is with those solids and fluids that are compatible with and pregnable by those diseases, the sources whence they derive their constituents with the view of their control. The fetus in utero of a woman phthisical, if tainted with that disease, the little candidate for the opportunities of life is brought into the world hampered with an uncertainty, which, like any other uncertainty, can be defeated, when its dependencies are ascertained. The juices of its stomach and chylopoetic viscera that prepare the chyme and chyle are secretions from glands tainted with the disease, and the appetite, which is but their expression, seeks through life condiment gratifying to the sensories of the assimilants and avoids that not conducive to their taint. Thus the assimilants take up constituents that pass through a number of like glands to be further vitiated on their way to the thoracic duct. Phthisis is a general anæsthesia of the nutrient system, a constitutional disease sustained by an *imperfect decarbonization* of blood through the air-cells of the lungs, with degeneration and conversion of those cells and lung tissue. It is assumed that all tissues are derived from arterial blood. Phthisis is hereditary and

complete or accidental and incomplete, the latter a result of broncho pneumonia or any other accident, the former we have discussed, showing that the secretions from glands tainted corrupt the blood in its passage through the vascular system, make it a plasma for germinating morbid agents, and further, effect changes of the digestive juices, some of them acidified where alkalies should predominate so as to destroy everything from which albumenoid or azotized constituents can be assimilated, and produce the wasting of the muscular and fat tissues as well as the red corpuscles of the blood. And what to me is paradoxical is that as every other tissue of the economy slowly disappears, the correlative currents of nerve influence remain intact, without interruption. Of the theories extant on consumption we have not a word to waste; the delusive literature expended on them is in the interest of the sale of nostrums, and in the interest of the profession and sufferers I submit serviceable facts that will assert themselves, facts elicited from over one hundred cases, treated by me in the fifty-five years of my practice, from the evidence of my individual senses. As cancer is a disease *sui generis*, epithelioma a disease *sui generis*, so is phthisis *sui generis*, a conversion of lung tissue, perfectly independent of bacillus or microbe, though they both depend on phthisis for existence, a disease neither infectious nor contagious. From the pathological facts above set forth, the indications for treatment are plain. On the principle that to relieve the economy of vitiations that endanger the normal functions, nature allots that function to excretories which are classed in different systems, each constituted to excrete its specialities, as evidenced in intermittent fever. As soon as the perspiration breaks out, the whole system is relieved. Diarrhœa or dysentery are the precursors of the crises in certain fevers, evidencing the efforts of nature to relieve the system of pernicious matters, in disease as in health. We will take advantage of that principle in its time and place. A constitutional disease and constitutional remedies are to be relied on till their physiological effects are produced. No topical remedies are admissible, they but add fuel to the fire. No palliatives for the cough, neither ergot nor atropine for expectoration and night sweats. Beware of quinine and antiperiodics, they increase the impulse of the heart and rupture the emaciated coats of the blood vessels. After the desired effects of the constitutional remedies, they may with caution come into play. First neutralize the vitiated gastric juices that prepare the chyme, then a remedy that will destroy any plasma for bacillus, microbe or any other germ, thereby preparing the way for a substitute that will increase the red globules of the blood to support healthy granulations and produce a sound tissue. Such is the *rationale* of treatment. A disease that tries the patience involves deep in-

terest and anxiety of the physician in charge—some days on the gain, then a backset, the fever coming on sooner than its regular time, and temperature of a higher grade. When that occurs he may depend that imprudence and excitements concealed are the cause; he must be firm and not vary from the treatment about to be laid down. And I may as well observe here that where phthisis is complicated with absence of the menses, all attempts to force that function with me have proved unfortunate. The immense patronage given to Fellow's hypophosphites calls for a notice. That the combination of hypophosphites of lime and soda are indispensable we heartily agree, but not in connection with Fellows' extortion. It is all very well to surprise the community with a remedy for a disease with certificates from a bishop to a layman of its miraculous virtues, and scientifically set forth that it will restore to the system the salts and other constituents of which it is deprived. Much like a man fisticuffing another, and the poor devil taking the licks engages a doctor to plaster the wounds while his antagonist lays them on. So far as restoring the fat, where the disease is inimical to it, any attempt to administer oils or emulsions is set at defiance by the diseased glands pouring on the condiment juices that convert it into plasma to germinate microbe and bacillus. On the theories coined or in progress I have not a word to waste; but into the scales of honesty and truth submit this curt treatise. The general treatment is divided into that during intermission of the fever, and that during the fever each having a distinct separate object to accomplish; the one prepares the way for the other. After the system is brought under their control, topical and palliative remedies become admissible, to regulate the habits of the reflex nerve system and perfect a cure. The tone of the system, differences of temperament and unforeseen interruptions to the administration of remedies, the physician in charge, supposing him to be a fair physiologist, must discriminate as to doses and their intervals. We take as a schedule a fever of twelve hours, intermission of twelve hours. The first six hours of the intermission should admit three doses of the antiseptic; the other six admit of two or three doses of the pulmonic mixture; the first six hours of the fever will admit of two doses of creosote, the other six hours of two doses of the eliminative. Antiseptic—B Bi-chloride mercury, $\frac{1}{4}$ gr.; Fowler's solution 3 ss, creosote 40 drops; chloroform, 40 minims; aqua, $\frac{3}{8}$ viii., M; tablespoonful doses. Pulmonic mixture—B Solution of iodine comp., $\frac{3}{4}$ iv.; bi-chloride mercury, $\frac{1}{4}$ gr.; Fowler's solution, 3 ss.; strychnine, $\frac{1}{4}$ gr.; tablespoonful doses. Eliminator—B Bromide potass., gr. x.; aloin, gr. vi.; hydro-chlorate pilocarpine, $\frac{1}{4}$ gr.; aqua, $\frac{3}{8}$ ii., M; two tablespoonfuls a dose, one every two hours. Pulmonic mixture—B Iodine resublim., $\frac{3}{8}$ ii.; chlorate potass., $\frac{3}{8}$ iiss.; iron tacks, $\frac{3}{8}$ i.; aqua

one gallon, 30 days in solution before it is ready for use, and then only draw off at times the quantity required. If a fixed pain in the chest, blister; if not fixed, a mustard counter-irritant. If after the fourth day of treatment the cough at night is persistent, stop the creosote and administer B hypophosphite soda, $\frac{3}{8}$ ii.; hypophosphite lime, $\frac{3}{8}$ i.; Fluid extract lippia mexicana P. D., $\frac{3}{8}$ i.; aqua, $\frac{3}{8}$ x.; tablespoonful doses.

EDITORIAL NOTE.—D. W. Williams, M. D., M. R. C. P., London, in the *Hospital Gazette* calls attention * to a novel and hitherto untried method of treating tubercular consumption, *per vias naturales*.

It occurred to me that there was nothing—judging from the adoption of the habit largely as a luxury, at all events in the past—to prevent the introduction of *powerful and safe* germicide antiseptics in the form of snuff, into the alveoli and other pulmonary tissues, where it would come into *direct and destructive* contact with the *bacilli* in their favorite and most generally selected habitat. It is a well-known fact to all habitual snuff takers that a large quantity of it is swallowed and conveyed into the stomach, in the act of insufflation, as well as being simultaneously inhaled into the lungs.

It therefore follows, *a fortiori*, in *medicated snuffs*, that these highly efflorescent antiseptics would be rapidly taken up by absorption from the stomach and conveyed directly into the blood current and pulmonary circulation in particular, there to combat embryonic germs *in transitu*, and thus it will be observed the circle drawn around them is complete, and the enemy thereby attacked in the *front* and *rear*.

In laryngeal forms of phthisis, and other formidable diseases of that organ, the topical contact, through insufflation of the antiseptic snuff, would be productive of much benefit, if not a cure, together with other structural changes in the pulmonary tissues incidental to consumption. Also through their antispasmodic qualities these insufflations would be invaluable, I feel convinced, in all spasmodic affections of the larynx. This would be accomplished not only by setting up *sternutatory counter reflex* action through Schneiderian irritation, by means of *ordinary snuff*, so ingeniously suggested by Sir Morell Mackenzie, and recently reported in *The Hospital Gazette*, in opposition to the gastro-thoracic—if they may be so termed—reflexes, or in antagonism to the less frequent central irritation; but in its *medicated form* by direct and sedative topical action on the rima, through the recurrent laryngeals, obviously most frequently.

My acquaintance, I am ready to confess, with the literature and history of snuff is very limited, but that it is manufactured from powdered tobacco stalks and leaves I think I am right in stating, and that the first brand among the different preparations is, I believe, "*Prince's Mixture*." The habit of taking snuff by both sexes we all know, traditionally at all events, existed in very remote times, and in my own recollection it was vastly more indulged in than in the present day. This habit, doubtless, in common with many others, had strong reasons for its origin at some remote antecedent period. Who knows but that ordinary snuff was introduced as an antiseptic—which it is *slightly*, by virtue of the *lobelia* so largely entering into its composition—and deodorizer, and for the prevention of the

* From *The Hospital Gazette*, January 3, 1891.

consumptive tendency? By all accounts it appears, at all events, that consumption was less prevalent formerly than in the present day, and that it is less so now in countries where snuff is largely indulged in by both sexes, viz., as in France and Switzerland, especially among the lower order. I have also myself witnessed in some instances the survival of perhaps one brother out of large families, all inheriting strong tendencies to consumption, and all of whom succumbed in adult life to this fell disease, excepting the *inveterate snuff taker*, who lived to a good old age.

This medicated form of snuff acts also as a sentinel at the gastro-pulmonary portals—the fauces and glottis—to prevent the ingress of any infective germs, which, according to some very high authorities, is alleged to be highly communicable in consumption.

A small pinch taken frequently acts *par excellence* in accordance with the modern system of exhibiting small and frequent doses of most drugs—there are, however, notably some exceptions—as being more effective by their continued action, and remaining in constant contact with the *materies morbi*, than larger doses less frequently given.

The medicated snuff is mainly composed of one of the preparations of sulphur in combination with other antiseptics, expectorants and antispasmodic sedatives; the preparation of which will be left in competent practical hands. It is cheap and within the reach of the poorest—and safe—no small matter in its *indiscriminate prophylactic use*, with slight medical supervision only, just as in ordinary snuff taking.

PODOPHYLLIN AND MERCURIO CHLORIDE IN DIARRHOEA.

BY ALFRED K. HILLS, M. D.

DR. H. A. HARE, Clinical Professor of the Diseases of Children, University of Pennsylvania, says, regarding podophyllin and mercuric chloride in diarrhoea, that, “as with many other things in medicine, the knowledge that these drugs are employed by the uninitiated without specific information as to the time of their employment, renders their use almost impossible in this way.”

“Two forms of diarrhoea exist which should be treated by their use. The first is that dependent upon deficient secretion of the various intestinal juices; the second upon fermentation and irritation of the intestine, with the formation of mucus in the alimentary canal. In the instances where secretion is defective, podophyllin in minute amounts is of value, and the indications for its employment is a history of constipation accompanied by the occasional passage of slightly colored or greyish stools, which has ended in a sudden reversal of symptoms, consisting in a watery diarrhoea of a more or less profuse type, containing particles of curdled milk or pieces of food semi-digested. These passages are often somewhat musty or mouldy in odor as the case progresses, and the entire attack is one in which the patient rapidly wastes, has persistent vomiting, and almost uncontrollable watery purging, which, if it be retarded briefly by powerful remedies,

seems to renew its vigor through delay. Under these circumstances the following prescription is of service for a child of from sixteen months to two years:

℞ Resinæ podophylli.....gr. i.
Alcohol.....f. 3 i.

M. Sig. One drop in a teaspoonful of water every five hours.

“In an older child two grains may be placed in the prescription instead of one. As soon as the passages begin to show slight evidences of intestinal secretion, as may be noted by the appearance of some tinge of yellow or brownish color, the physician will recognize that his remedy has not failed, and with the employment of proper diet can regard the child as on the way to recovery.

“Generally, persistence in the use of this drug in the manner named for a day or two longer will bring the intestinal movements to a natural state without producing constipation, an extreme generally arrived at if astringents are employed.

“The second form of diarrhoea is that in which the mercuric chloride is of value. It is characterized not by watery stools, but by mucous passages in which flakes or masses of mucus float in a little watery liquid, or are passed from the bowel alone or mixed with threads of blood.

“Sometimes particles of food are seen embedded in these masses of mucus, which by their toughness prevent the digestive juices from acting on the food, which they envelop like the gelatine coating of an old pill. The following prescription is now of value:

℞ Hydrarg. chlor. corros.....gr. 1-5.
Aq. destillat.....f. 5 ii. m.

Sig. Teaspoonful every five hours.

“The physician must insist on the druggist using distilled water, as if tap-water is employed the mercury salt will be decomposed and a precipitation will occur, rendering the treatment both useless and harmful.”

The writer, while agreeing with the excellent suggestions of Prof. Hare, respectfully offers the following additional indications, which have made the selection more certain in his experience:

In the case of podophyllin, one of the most characteristic of the indications which has led to its selection, has been the rolling of the head from side to side, sometimes accompanied with moaning and grinding of the teeth.

We have observed what seemed to be the most hopeless cases recover under the administration of this drug, and we have learned to look upon these symptoms as very suggestive for its use.

Thirst for large quantities of cold water, and regurgitation of food which has become sour, are indications to be depended upon. *Bryonia alba* is a remedy which should be differentiated under these circumstances, the constipation being characterized by dry crumbling faeces and there is

thirst for large draughts of water. A diet richer in hydro-carbons will be useful in such cases.

Phosphorus is useful in cases when the food is regurgitated by the mouthful, as sweet as when it was taken, the stools are painless, of undigested food, with a history of constipation, the faces being long, slender, dry, tough, hard and voided with difficulty. There is great thirst for cold drinks, which are ejected as soon as becoming warm in the stomach.

Podophyllin and mercuric chloride stand in an antidotal relation toward each other.

In our experience mercuric chloride can not be substituted for any other preparation of mercury. We ought to bear in mind the phagedenic tendency and the persistent corrosive tenesmus, to which mercuric chloride is so admirably adapted. Mercuric chloride when otherwise indicated will relieve an unquenchable thirst for cold water from which even young children suffer.

These little ones, to which mercuric chloride is adapted, suffer with great debility, lie with their knees drawn up bathed in perspiration, are prone to glandular swellings, and suffer most at night.

BAPTISIA AS AN EPIDEMIC REMEDY.

Baptisia tinctoria seems to be one of the epidemic remedies at the present season. It is indicated in torpid conditions where there is great indifference to every thing, prostration, and a feeling of good-for-nothingness which is liable to characterize any affection. We have found this remedy of the greatest service in catarrhal conditions at any point, accompanied sometimes with dark indolent painless, offensive ulcerations with the torpid state above referred to. The tongue is generally heavily coated in the center with shining edges, sometimes ulcerated.

The chilliness in these cases is mostly confined to the back and lower extremities, while the tissues feel as if they had been bruised, so that the couch feels hard even when it is not.

The key to the selection is the low typhoidal state, which is characteristic of the drug.

OHM'S LAW AND ITS PRACTICAL APPLICATION TO ELECTRO-THERAPEUTICS.*

BY HENRY N. WINTON, M. D.,

Assistant to the Chair of Materia Medica and Medical Chemistry, University of California.

AS electro-therapeutics, or the science of electricity applied to the treatment of disease, is concerned with all of the varieties of electric currents that may be produced, and as each current has its own distinct physical properties, as well as therapeutical actions, it naturally follows that a knowledge of electro-physics—the scientific basis of electro-therapeutics—is essential in order that

the operator may use electricity effectively and extend his knowledge beyond mere empirical practice. Much of the unfriendly criticism of some members of the profession, and the ill-success of many who are now making common use of electricity as a therapeutic agent, is, in the light of accumulating clinical facts and the experiences of scientific workers in this department of medicine, dependent upon insufficient knowledge of the laws which govern and of the varying qualities and nature of electric currents. A knowledge of what the physician is prescribing is no less important in electricity than in the use of any other therapeutic agent.

There is, probably, no one subject in electro-physics of such practical value to the physician and at the same time so generally neglected as the law of electrical currents discovered by Ohm. Ohm's law has, not without reason, been called the "North Star of Dynamical Electricity," for it comes into play in all practical applications of electricity, explains many facts related to the uses for which certain forms of batteries are best suited, and forms the basis of all electrical measurements. The operator who bears its essential points in mind will have a more just conception of the problems he encounters in his work, a clearer understanding of many clinical facts indirectly related to the subject, and of the rationale of the methods of application used by electro-theraputists.

Ohm's law: The *quantity* of electricity passing through any point in a circuit varies *directly* as the *electro-motor force*, and *inversely* as the *resistance*.

In order to make this law and its application clear, it is important, first, to define the terms already introduced, and some of the units of electrical measurement.

Potential.—All substances have an electrical condition known as potential. A substance from which electricity tends to flow toward the earth is called positive or of high potential, while a substance which tends to draw electricity from the earth is called negative or of low potential. The element most acted upon in a galvanic cell has the highest potential.

Quantity and intensity of the current are terms used to denote the strength of the current, or the amount of electricity passing through the circuit in any given time.

Electro-motive force is a term used to denote the sum of all the differences of potential in a galvanic circuit. It is "the force that urges forward the current."

Resistance is a term used to denote the degree of obstruction opposed by the circuit to the passage of electricity through it.

Internal resistance is the obstruction offered to the passage of the current between the elements of a cell.

* *Pacific Medical Journal*, June, 1890.

External resistance is the resistance outside of the battery.

An ohm, the unit of resistance, is the resistance necessary to produce one ampere of current under an electro-motive force of one volt.

The volt is the unit of electro-motive force, i.e., "the unit of measurement of the pressure at which a current is delivered." A volt is the amount of electro-motive force necessary to yield a current of one ampere through an ohm of resistance. For medical purposes the current is measured in *milliamperes* or thousandths of the *ampere*.

Now that we are prepared to consider the law of ohm, we certainly can not find a better example, illustrating at the same time its importance and practical value, than in the misapprehension so common among physicians regarding the effect of the size of cell upon the quantity of electricity passing in the circuit. The difference of potential being the same, the electro-motive force of a cell of given elements is the same whether the size be large or small. The internal resistance of the former is less, because the "resistance of the column of fluid between the elements varies inversely as its sectional area." Now, if the external resistance be low the large cell will give the greater quantity, but if the external resistance be high, the advantage gained by the diminution of the internal resistance will not materially increase the intensity of the current. This is shown by Ohm's law. . . . While the large cells give us practically no increase in current-strength, hence no therapeutic advantage, experience teaches us that medium-sized cells should be selected for batteries designed for medical purposes (galvanization, electrolysis and chemical galvano-cauterization), on account of the greater amount of materials they contain. They last longer, do not require attention so often, and furnish a current of uniform volume.

If there were no external resistance one cell would give as much current as a hundred, or, indeed, any number of cells. . . . It will be readily seen that, in devising a battery for cauterization purposes, where the external resistance is very low, large cells should be used, and, as little gain will be effected by multiplying the number of cells, a very small number are required.

One of the most important lessons learned from Ohm's law is the necessity of a more scientific and accurate basis for recording observations and directing treatment than by stating the number of cells used. The electro-motive force varies in different batteries, and in the same battery from day to day, owing to the gradual exhaustion of the battery fluid, from polarization and other causes. The internal resistance is also a variable element for similar reasons. But it is in the external resistance—the resistance afforded by different individuals—that we find the greatest variance and in-

constancy. Not only does the conductivity of the same tissues vary in different individuals, but the thickness and moisture of the skin, the material and moisture of the electrodes and the degree of pressure with which they are applied to the surface of the body, and the duration of the sitting, all determine differences in the resistance, hence we can readily understand that there can be no constant relation between the number of cells in the circuit and the intensity of the current. Precision of dose being no less important in electricity than in the use of any potent remedy, the introduction of the milliamperemeter marks an important advance in medical electricity, as the deflections of its needle measure the intensity of the current that passes through the body, and represent the dose actually taken. This is an element of the utmost importance to every operator who uses the galvanic current and expects to repeat the treatment followed by others or intelligently report and record his own observations. The milliamperemeter forms an indispensable part of an electrical outfit.

Directly and indirectly we owe to Ohm's law the explanation of many important clinical facts which have long been practically recognized.

1. Toward the end of a *stable* galvanic application a current of definite electro-motive force is more perceptible to the patient, and the milliamperemeter registers an increase in the current-strength, owing to the diminished resistance of the skin as it becomes thoroughly moistened.

2. Electrodes applied to the surface of the body firmly and evenly render the current more uniform and even, and assist in its conduction by diminishing the resistance.

3. Saturating the electrodes with a weak solution of *sodium chloride* increases the conductivity of the skin by lessening the resistance. For the same reason electrodes wet with warm water conduct better than those wet with cold water.

4. The density (compactness) of the current is in inverse proportion to the size of the conductor through which it flows; therefore, with the same current-strength, it is greater when we apply small, less when we apply large electrodes. When the area of disease is near the surface, we often apply large electrodes in order that as dense a current as possible may enter it, but if we wish to affect a deep structure by percutaneous transmission, without excessive pain, large electrodes should be used, for the reason that, as the current becomes very much diffused before reaching it, it is necessary that a large quantity of electricity should enter the body.

Eight patients are being treated in the Post-Graduate Hospital by Koch's lymph. Three of them are cases of lupus; four are cases of phthisis pulmonalis and one laryngeal tuberculosis. The inoculations are in charge of Dr. W. C. Bailey, who was for a long time a student in Koch's Laboratory, assisted by the Director of the Laboratory, Dr. J. H. Linsley.

CLINIQUE.

CLINICAL CASES.—HEMOPHILIA.—MALIGNANT (?)
DISEASE OF THE STOMACH.—PURULENT PACHY-
MENINGITIS OF TUBERCULAR ORIGIN.By T. H. CARMICHAEL, M. D., GERMANTOWN,
PHILADELPHIA.

THE following cases, which occurred consecutively in my practice, are reported in the hope that they may contain some points of interest to others:

Case I. Hæmophilia.—Fred. A. B., æt. three years, while playing with a tin blow-pipe, fell with it in his mouth, causing a slight abrasion of the mucous membrane behind the upper incisors. Hæmorrhage ensued, and had been more or less continuous for four days when I was called to the case.

Upon inquiry I obtained the following family history: Nationality of both parents English. Father's family healthy, but the mother (who is in perfect health) gave a history of bleeders. Her father died of hæmoptysis. He had fourteen children, of whom two bled to death in early life (one of these from the lancing of a gum during dentition), and a third brother lived to be twenty-one years of age, when he died of hæmoptysis. His life had been marked by recurrent attacks of epistaxis that were controlled with the greatest difficulty.

A cousin has also lost two children from bleeding (one from internal hæmorrhage caused by a fall), and a third child, now about twelve years of age, has been under the constant care of Sir William Jenner.

Our patient is a twin child—the other (a girl) shows no manifestation of the weakness. They are the youngest of six children, the rest of whom are healthy. (The eldest is a boy—the others are girls.)

The patient is a blonde, with auburn hair and blue eyes. His skin was very white (partly from anæmia), and largely marked with large purple spots resembling purpura hæmorrhagica. These ecchymoses would appear almost instantly where the surface received the slightest injury, as from a jar or fall, and frequently they appeared spontaneously. In other respects he was fairly well nourished, and mentally was bright and active.

On examination I found a steady capillary oozing from the abraded mucous membrane. The bleeding had occurred mainly at night, and every morning his mouth had to be cleared of large clots which so filled it as to interfere with respiration.

I endeavored to stop the bleeding by making pressure with absorbent cotton saturated with perchloride of iron, but without success. I then tried internal medication alone, giving phosphorus

4x dilution, but the second dose produced emesis of large clots of blood, and as every subsequent dose was followed by vomiting it was soon discontinued.

I next applied a few strands of cotton that had been rubbed into dry Monsel's salt. This was covered with collodion. Hamamelis was given internally. This treatment was persevered with and the bleeding ceased about the ninth day.

About a month subsequently it recurred near the former place, and apparently spontaneously. There were two prodromic symptoms, fretfulness and slight constipation. The bleeding occurred again at night, remitting in the daytime. This attack yielded to internal treatment alone—mainly millefolium tincture.

The case is now on phosphorus as a constitutional remedy, which I am giving on account of its profound action on the blood and blood-vessels. This action is so tersely expressed by Hahnemann in the classic symptom, "small wounds bleed much."

In most of the reported cases of bleeders no histological changes have been found in tissues or blood-vessels. Kidd, however, "found degeneration of the muscle-fibres of the middle coat of the arteries, and the endothelium of the small arteries, veins and capillaries was swollen, proliferated, and some of the small veins were blocked with the products." (Pepper Syst. of Med., Vol. III., p. 936.)

Wegner says: "I have examined a considerable number of cases of acute poisoning with phosphorus, and should like to give a prominent place to the fact that it is not only the central organ of the circulatory apparatus that is involved in the fatty degeneration, but also the peripheral parts of the arterial system, even so far as the minute microscopical vessels. The principal symptoms of it are the sanguineous extravasations." (Virchow's Archives Bd. LV.)

At this writing the case has not been under observation long enough to report results, but is progressing favorably.

It is of interest on account of its rarity, and also because it agrees in several points with the other cases recorded, viz., in the transmission of the weakness through a healthy mother; in the peculiar type-blond with red hair; in the presence of prodromal symptoms (in this case constipation and irritability), and also in the immunity of the first-born (a male) from the hereditary weakness.

Case II. Supposed Malignant Disease of Stomach.—Mrs. J. L., æt. seventy-two. Twelve years ago had repeated attacks of vomiting with general prostration of so severe a character that an unfavorable prognosis was made. Since then she has had more or less continuous trouble with her stomach.

For years her diet has been restricted to a minimum quantity of light food (mainly semi-fluid),

and she has been unable to digest any kind of solid meat.

I found her very thin and anæmic, and suffering from an acute attack of gastric catarrh. She was very weak from the incessant vomiting and severe pain. The pain was not localized, but extended over the epigastric and hypochondriac regions. The vomited matter consisted of ingesta and a bilious fluid—at no time did I find any blood.

Careful physical examination failed to reveal any abnormal condition of stomach or liver. I diagnosed gastric catarrh, with neurasthenia and possible incipient malignant disease of stomach or liver.

Treatment—Hot water in considerable quantities for lavage, bovine, Wagner's food and other prepared foods in small quantities and at frequent intervals. Ipecacuanha, bismuth subnitrate, carbo. veg. and other remedies were given as they seemed to be indicated.

At first improvement was marked, but relapses occurred frequently from no known cause. Several weeks afterward Dr. W. C. Goodno saw the case in consultation, and from her age, previous history and present condition feared beginning malignant disease of stomach, although careful physical examination of stomach and liver again produced negative results.

At one time he had a similar case where he suspected a malignant growth of the stomach, but was unable to make a positive diagnosis. Carbolic acid was given for a considerable period, with the result of complete relief of all indications of stomach trouble. Some time afterward he learned that she had died of another disease at an institution, and on requesting an autopsy with special examination of the stomach, the operator reported a malignant growth of the stomach in an atrophied condition.

We gave our case carbolic acid one drop *ter die* in hot water. It was soon followed by steady improvement, and after taking it for five months she reported herself in better condition than for many years. She has a good appetite for ordinary table-food, and goes about apparently well.

While no satisfactory diagnosis of this case could be made, yet the effect of the carbolic acid treatment is certainly instructive.

Case III. Purulent Pachymeningitis of Tubercular Origin.—Miss E. R., æt. eighteen. Strumous. Has had naso-pharyngeal catarrh and otitis media for several years. When called I found her complaining of lassitude, headache and intense pain in the left ear, which was discharging profusely. There was also some discharge from the right ear. The ears were loosely packed with boric acid, which was removed every night by syringing, and internal remedies were given with marked relief of all symptoms.

On the seventh day after my first visit she suddenly developed tonic and clonic convulsions, with strabismus and slight inequality of the pupils.

After regaining consciousness she experienced intense pain in the frontal region and in the left mastoid. The latter was almost unbearable, but it was the only indication of mastoid disease. Delirium was a prominent symptom. At no time was the temperature above 101.2. I diagnosed brain abscess, which I supposed was related to the disease of the left ear. Up to this time the treatment consisted in the application of heat to the head, mustard over the mastoid and nape of the neck, and belladonna, hepar sulph., acetanilide and codeine internally.

On the tenth day Dr. Carl Vischer saw the case in consultation, and suggested incision and trephining the mastoid.

On the same evening I made a free incision over the mastoid, but with a negative result, and on the next morning Dr. Vischer trephined the mastoid, but without any indication of pus or diseased bone. It was then decided to explore the brain itself, and on the following morning Dr. Vischer, with Dr. Clarence Bartlett and myself, trephined the skull at the usual point above Reid's base line for cerebral abscess following suppurative ear disease. On removing the bone the tissues surged into the opening showing some abnormal tension, but incision of the dura and pia matter and probing in every direction failed to discover pus. The probe met with no resistance save when it came in contact with the tentorium. The wound was dressed antiseptically, but loosely, so as to favor the exit of pus should it have been overlooked.

The patient rallied nicely from the operation, and for several hours was apparently relieved, but delirium and restlessness again recurring, she was given phenacetine and morphia with good results. On the following day she was rational, took bovine and chicken-broth, but at eight P. M. died suddenly while an attendant had left the room.

Post-mortem made by Dr. Vischer with Dr. Bartlett and several other physicians revealed no evidence of mastoid disease. The brain was heavier than normal, and the anterior lobes were hyperæmic, otherwise there was no marked abnormal condition found in the cerebrum. On the under surface of the tentorium, and within a quarter of an inch of the edge of the trephined area, pus was found. There was about a drachm of it spread over the membrane. From the appearance of the parts it was decided to be of tubercular origin. The diagnosis made by Dr. Bartlett, and concurred in by all present, was purulent pachymeningitis of tuberculous origin.

The case is interesting from the fact that it followed an acute catarrhal otitis media; that the subjective symptoms mainly pointed to the ear as the source of the trouble; in the location of the pus over the cerebellum and in the fact that from the trephined opening it could have been reached by perforating the tentorium.

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MORAL INSANITY.

IT IS almost as difficult to mark the dividing line between moral insanity and absolute wickedness as it is between daylight, twilight and night. There is no sharply defined line between the two conditions. The picture of two natures in the same individual—one full of beauty and the other a fearful monstrosity, cruel, treacherous and malicious—has never received a more realistic setting than that given by Mr. Mansfield in Dr. Jeckyl and Mr. Hyde. That picture in all its bright beauty and childlike innocence on the one side, with a nature bright with sunshine and purity, and on the other as black with every vice, as if it had been spewed out of hell as too unholy even for that accursed place, is not an unfrequent sight in every day life. A picture rises before us now of a wedded wife and mother, with a home of beauty, luxury and refinement, with a loving husband and children, and devoted friends to whom she was ever a welcome companion, who had lived a double life almost from the day of her marriage to the time, years after, when she deserted home, friends and decency with her beastly paramour, who had been her husband's friend and had fondled her children on his knee, to live openly a life of infamy and flaunt her shame before the world. For an unholy life of lust, treachery, malice and slander she hurled from her the last vestiges of the love and purity of the wife, the mother and the daughter, and preferred to drink of the hell broth from the witches' cauldron of vice than of the love from the lips and the eyes of husband, children and parents.

Was this moral insanity creeping on step by step, ever gaining increased mastery, with each succeeding step taking a firmer grip until, with a fiend-like exultation, she sought to drag down in shame and sin the social fabric of home and the friends who had sought to make her life happy with their loving tenderness and kindness? Or in the process of evolution, had the cunning and sharpness of the intellect kindled into activity the vilest passions of the animal world, only to use them with the cunning of hell in the pleasures of lust and the machinations of hate and malice? In the presence of such cases, of which almost every one has seen more or less, the conviction becomes strong that, no matter whether observed with some devilish spirit, or morally insane from brain lesions or the animal predominating over the spiritual, they are a curse to society, and should on the first transgression of law be placed under restraint until some signs of a desire to live a better life was perceived.

There are cases however of moral insanity which appeal strongly to our sympathy as the result of a condition of the brain, which impels one to an act which at other times would be looked upon with loathing and horror. The recent daily papers contained an account of a clergyman who was at times a marked kleptomaniac. He says he was impelled to his acts by a power he could not control. Often he would hear a voice calling him by name and telling him what to do. There were times when he saw the full enormity of his acts and sought to make restitution. Is not dipsomania a certain form of moral insanity, that is, in many cases, which the law should recognize in its decisions? The law, however, says "that drunkenness is no defence of crime," and it also says with equal positiveness, "where there is insanity there is no crime." If drunkenness is insanity, and it certainly is while the condition lasts, the law says it is voluntary insanity, which the victim can, if he chooses, always avoid. And yet who can say that there are not times in the dipsomaniac when there is a peculiar condition of the brain which he seems powerless to control. It impels him onward to the commission of an act with almost relentless force. If the spirit is exorcised with prayer with a fierce mental combat it may be only to return again after a short time with an increased and conquering force.

Never shall we forget the tones of despair which swept through the room like a wave from the pit of hell as we entered the study of a brilliant clergyman, upon whose words of eloquence in the pulpit and on the platform thousands had

often hung entranced. "Oh! it is no use," he almost shrieked as we entered, with the tears rolling down his cheeks, "I am doomed! doomed! This vice which is poisoning my life and dragging me down to disgrace and death is not only a bitter inheritance from my father, but nourished from the milk I nursed from my mother's breast." It is very easy for the man who has no temptations to vice, who has no cravings for alcoholic stimulant, to sit in judgment on those whose terrible inheritance has left its stamp so interwoven with the very tissues of the brain that it requires a life long struggle to overcome, but is the judgment even of the law always just. We have no apology for the careless drinker who indulges simply for good fellowship, but there is a class which comes directly under the head of insanity when the condition should be treated as a mental disease and be considered as such by the law. And just here we notice as something which should be remedied, the absence of all provision in our State institutions for that class of nervous derangement which the law does not class as insanity. In this class we should include catalepsy, hysteria, kleptomania, dipsomania, and a large variety of mental and nervous troubles. For these troubles pavilions could be erected in connection with our State hospitals into which the patient could enter and be cared for without legal commitment if so desired. These provisions would reach a class of moral insanity just as much in need of help as the more dangerous cases. In the not distant future we hope some such plan as we have outlined may be inaugurated in our State.

CONSTIPATION.

ANY remedy which will relieve permanently constipation will be looked upon as a most valuable addition to the materia medica. The trouble in the majority of cases is in the descending colon and the rectum, and is occasioned by a lack of action attended with great dryness of those parts. The fecal matter packed in the rectum, becomes almost as dry and hard as stone. Two of the best remedies heretofore brought before the public for chronic constipation are undoubtedly cascara and nux-vom., both of which act as powerful stimulants upon the nerves which supply the colon and rectum. One of the best preventions of constipation is to prevent the fecal matter remaining for any length of time in the rectum, and this is often accomplished by a morning and nightly attempt at stool, remaining if necessary fifteen or twenty minutes. The gluten and glycerine suppository are often most

effective by increasing the moisture in the rectum and bringing on peristaltic action. Even more efficient than these will be found suppositories containing a fourth of a grain of ex. nux-vomica, the drug in this way coming directly in contact with the partially paralyzed organ. Boric acid applied in the form of a powder to the nasal passage produces a free watery discharge, carrying away all the secretions of the air passage. Acting in the same manner, Herr Flatan finds the drug most efficient in constipation. About thirty grains are dusted on the mucus membrane at the anus, if it can be seen; if it can not be seen, the powder is thrown into the rectum by an insufflator and the patient kept quiet for a time. In from an hour to two hours the regular drug action will be noticed in a marked peristaltic movement in the colon, followed by an evacuation in which the action of the drug will be clearly seen in the softening of the fecal mass over the surface, with the watery mucus occasioned by the stimulating of the mucus membrane. Herr Flatan says he has never seen a failure in this method of treatment and, if carried out systematically daily, permanent improvement in time takes place and the bowels resume their normal action.

STATE MEDICAL LIBRARY.

AT THE recent annual meeting of the regents of the University of the State of New York, on the motion of Dr. William H. Watson, the following resolutions were adopted:

That we accept from the Albany Medical College the gift of its medical library of 5,000 volumes, undertaking to give the same convenient space and proper care, and to keep them open to the public during the same hours as the State law library; and, That the regents establish a medical department of the State library, and that the legislature be asked to appropriate a suitable sum for its proper maintenance.

In moving the adoption of the resolutions, Regent Watson spoke as follows: "It affords me great pleasure at the same time to move the acceptance of the generous gift of the Albany Medical College to the University of the State of New York, and the passage of the resolution creating the medical department of the State library.

"The former furnishes the nucleus of the latter, which in its beneficent results, reaching far beyond our present apprehension, will prove of incalculable value alike to the people and to all branches of the medical profession of this imperial commonwealth.

"With the single exceptions of the library of the New York Academy of Medicine and the New York Hospital, at this moment I fail to recall the

existence of any considerable public collection of medical books in the State of New York.

"The founding of the medical department of the library at this time is a peculiarly proper function of the regents, who are already charged with the supervision of the preliminary education of medical students.

"Located at the capital of the Empire State, the medical department of the State library will render most important service to the medical profession, also by logical sequence to the laity of the State.

"As a striking illustration of its future value, permit me to cite the fact, which may not be known to the members of this board, of the existence of a publication entitled the *Index Medicus*, which each month apprises the practitioner of medicine of the title of every article of importance which during the month preceding its issue has been published in the English, German, French, Italian, Spanish or Russian languages, upon any subject within the range of medical science. As the number of medical periodicals which can be taken by any individual practitioner is necessarily small, it follows that even to those who are subscribers to this valuable work, an infinitely large number of the articles indexed by it are entirely inaccessible.

"When, however, the medical department of the State library, of which you are to-day laying the foundation, shall have reached a ripe age in its development, every reputable physician within this State will be able through its instrumentality to readily avail himself of the benefits to be derived from this most valuable index, and have an opportunity of freely consulting thousands of important monographs and publications which must otherwise forever have remained to him a sealed book.

"I most heartily and cordially move the adoption of the resolutions."

IS ASTHMA A NEUROSIS?

IF ASTHMA in its various disturbing forms is the result of reflex action, relief must be obtained by remedies whose action is not only upon the direct cause of the disturbances, which may be located in another part of the body, but upon the whole nervous system. The disease is to be looked upon not simply as a local trouble, but from the same standpoint as epilepsy, with an asthma center in the medulla, which may be acted upon by mental emotion and through almost every nerve tract in the body from any local disturbance producing those explosions of the nerve centers

which, reflected upon the chest, give rise to spasms of the glottis, the diaphragm and the bronchi, with the vaso-motor disturbance of the whole chest to what Hughbray Jackson, from the close resemblance of the attacks to epilepsy, has called "respiratory convulsions." Asthma, like epilepsy, has been the opprobrium of our profession notwithstanding the ingenuity of science and empiricism has been taxed to furnish a satisfactory remedy. When the lesion, if lesion it may be called, has already been established in the nerve center, we shall be more likely to find permanent results from that kind of life which brings into harmonious activity every organ of the body than in any one or combination of drugs, however potent.

The first inquiry of the physician, then, in these cases should be as to the manner of life, the habits of work, the kind of food, mental and physical, and the advice so directed that each organ in performing its proper function should work in harmony with the rest. This could not in all cases be accomplished, and there would be occasional admonitions in convulsive spasms in breathing, but in time the whole system would be in such harmonious working order that the old enemy would be remembered only as a hideous nightmare. Physical teaching, scientifically carried out, will in time consign to the tomb many of the most fearful forms of neurotic trouble which now torment the human race.

THE NEW REMEDY.

IT WILL be remembered that La Verrier and Adams, one in France and the other in England, by the same line of mathematical calculation without any communication with each other, located the new planet where it was afterward seen by the telescope, and published the results of their works at the same time. It seems now that while Dr. Koch has been quietly working in his laboratory an American physician, Dr. Dixon, of Philadelphia, has, without any knowledge of Dr. Koch's work in pursuing nearly the same line of investigation reached in theory in the results obtained and in the fluid almost identical conclusions.

Dr. Dixon says, in the *Medical News* of October 19, 1889: "I called attention to a morphological change of the tubercle bacillus which was different from any that I had previously seen. This change of form suggested to my mind a possible evolution of function. I realized that it might mean that a greater or less degree of virulence would be desirable in order to increase the power of animal resistance to pathogenic organism. I

cultivated the bacilli in a number of tubes to the stage at which few or no ordinary rod-formed bacilli could be found in the culture. When they had arrived at this state of life, I embedded a mass of the bacilli and debris under the skin of a guinea-pig. The inoculation apparently set up a disturbance in the animal's economy, for a short febrile stage followed. The lymphatic glands became swollen and the guinea-pig seemed to be quite sick. This condition, however, soon passed away and the animal apparently recovered. Immediately after this injection the animal seemed to resist the effects of virulent tubercle bacilli.

"In working out the two hypotheses which I published in this journal, October 19, 1889, I became convinced that by treating a mass of tuberculous tissue containing the odd forms of bacilli with some powerful solvent, I might dissolve out a principle that, when injected into the animal economy, would change the chemical condition of the tissues and thereby prevent the growth of the tubercle bacilli that inhabit the tissue.

"To accomplish this I submitted the tubes containing this actual tuberculous bacillous growths to the action of ether and also to a saturated solution of sodium of chloride. The respective mixtures were then passed through a Pasteur filter without pressure. This active principle when subcutaneously injected in tuberculous animals, caused a febrile reaction. The tissue in the immediate neighborhood of the tubercles becomes hyperemic and the symptoms manifested resemble those produced by the introduction of a portion of the original. They also resembled the symptoms said to be produced in tuberculous animals by the introduction of the Koch remedy into the circulation, as well as those produced by the liquid made by Dr. Craft, of Cleveland."

TAPEWORM.

THE history of medicine shows that some of the most important specifics now in use have been revealed by accident rather than by any scientific line of investigation. Accident, perhaps, has revealed a secret which the trained mind has caught hold of and utilized in the right direction. One of the latest instances of this kind is the statement made by Dr. Parisi, of Athens, Greece, to the French Academy, of his experience of coconut oil in expelling tapeworm.

The writer, while travelling in Abyssinia, was resting in the heat of the noonday in a grove of cocoa trees and, being thirsty, drank freely of the milk and ate of the pulp of the cocoanuts which were on the ground about him. In a short time

he became very sick, and in a passage from the bowels expelled a tapeworm, entire and dead. The hint thus obtained was carried out in the private practice of the physician on the return to Athens with the most satisfactory results in every case. The patient, before breaking his fast in the morning, takes the milk and pulp of one coconut. No cathartic is needed. In a short time there is an active movement of the bowels in which the worm is expelled.

AURAL SURGERY OF TO-DAY.

NO SPECIAL department of surgery has advanced relatively as rapidly, within the last ten years, as that of aural surgery. This is due, *first*, to the application of the principles of antiseptic surgery to diseases of the ear; *secondly*, and perhaps chiefly, to improved methods of applying the aforesaid antiseptic principles, and *thirdly*, to the recognition of the fact that many diseases of the ear, once supposed to be neuropathic in their origin and referable to the internal ear, are due to synechial structures about the ossicula auditus, leading to mechanical changes in the middle ear.

Drainage in otorrhœa, and the application of antiseptic powders and fluids directly into the middle ear, have done much in bringing about a greater average of success in the treatment of aural diseases. But, one great difficulty has always confronted the aural surgeon whenever, to improve drainage and to gain better access to the tympanic cavity, he desired to perform an operation on the membrana tympani and ossicles, requiring the administration of ether and the absolute stillness of the patient for its successful performance. Because a patient thus etherized dare not be near enough to an open flame, to properly illuminate the ear, without the risk of taking fire.

Within the last five years this danger has been efficiently guarded against by the use of an electric head-light, of about six-candle power, run by a very portable storage-battery. By this safe illumination of the ear of an etherized patient, the aural surgeon becomes master of the situation in cases demanding excision of the diseased membrana tympani and the ossicula beyond. Defective drainage can now be overcome, and necrotic tissue removed from the tympanic cavity by operations impossible upon the unetherized patient, from their painfulness and consequent movements of the patient. For these operations are now done with promptness under ether and illumination by the electric head-lamp. This has rendered curable those forms of chronic purulency of the

middle ear, heretofore incurable by all methods in vogue; notably is this the case in chronic purulency of the recessus epitympanicus (the attic), with its sole outlet in the membrana flaccida, which has defied all forms of treatment, until excision of the diseased contents of the attic, under ether, has conquered it.

Then, in another category of cases, where there is no purulency, but in which thickening, retraction and adhesion of the malleus and membrana tympani, to the promontory, together with synchiae about the ossicles, cause deafness, tinnitus and vertigo, excision of these obstructed conductors, and the mechanical hindrances about them, is demanded in order to relieve the pressure of the stapes on the labyrinth fluid, and the symptoms caused by it. This can be performed only under ether or a similar anæsthetic, as the patient must be absolutely still, in order that the delicate operation of excision of the membrana and the removal of the malleus and incus can be accomplished. That these operations can be performed, under ether and electric illumination of the ear, with ease to the surgeon and greatest advantage to the patient, is a fact well recognized by surgeons, and is amply shown by the numerous operations which have been performed by otologists in this country and in Germany. When the subject of operative treatment of both suppurative and non-suppurative affections of the ear were discussed at the recent Berlin International Medical Congress, both German and American members of the otological section expressed themselves strongly in favor of the new method, and in papers and discussions on the subject added weighty evidence of its advantages over the old treatment.

Such an introduction of more rational and precise methods in treatment of ear-diseases will lead to a rapid differentiation of aural surgery, into a still more distinct specialty, and a complete removal of it from ignorant and unskillful hands, who claim they have done all when they have ordered astringent drops for an otorrhœa, or inflated the ears when affected with tinnitus and deafness. Thus is aural surgery already placed on a firmer basis and a much higher plane than ever before.

THE subject of medical unity is rapidly gaining ground in all the schools of medicine.

The *TIMES* is constantly in receipt of letters from far and near, urging on the work for which this journal has become notorious, and for which it has been much abused!

As a sample, we quote from a letter just re-

ceived from an eminent physician in the West, who says: "Your remark in January number of *MEDICAL TIMES* that 'there is in the West a growing sentiment in favor of the abolition of all "schools,"' is certainly correct. I predict that before the beginning of the next century that the present sectarian lines will have been almost entirely obliterated, and that within the next quarter century every true and progressive doctor will be practising *rational medicine* while the titles 'regular,' 'homœopathic' and 'eclectic' will have sunk into 'innocuous desuetude!'"

The extremists on both sides may fight as hard as they can against it, but medical unity is surely coming, and before long, too!

It would be much better for all, if we could realize this fact and direct our efforts to help bring it about.

The editor of the *Toledo Medical Compend* well says that "if a diversity of opinions is tolerated by all physicians there can be no need for sects in medicine. Nothing but harm can accrue to the medical profession by schism or sects and no excuse except for personal interests can be offered. If nothing but individual aggrandizement and gain is the object of sectarianism in medicine, then all honorable men owe it to themselves to abandon that which is no longer a contest for principle and unite with the humanitarian in his effort to relieve suffering humanity from its aches or pains, rather than continue to degrade the profession." We would ask the editor of the *Compend* to go farther and suggest a way in which this can be accomplished.

The homœopathic sect, bear in mind, was organized in self-defence, in consequence of the lack of toleration on the part of societies of the time of Hahnemann, and it has been natural that they should continue so long as this attitude is not changed!

If the school to which the editor of the *Compend* belongs, really wants medical unity, let him propose some plan which will be alike honorable to all concerned, and he will help bring it about.

The time is ripe for medical union upon just and equitable terms, and the *TIMES* will discountenance any method which will be dishonorable to any!

THE Commissioners of Lunacy, whose duty has been to carry out the State care act for the insane of 1890, have issued a lengthy report of their work during the past year. It is not claimed that the commission has exceeded its powers, or that they have acted in any other way than as executive officers administering the law as they understood it, and as they were advised by the

highest legal authority in the State; but this strict administration of the law has brought out in such strong relief unjust and obnoxious features that there is a very strong and growing sentiment not only in the profession, but among all classes of individuals who are interested in this matter, that the law should be changed in many important points. A strong effort will be made at this legislature to so alter the law as to bring it more in harmony with the present advanced state of knowledge of nervous diseases, and enlarge and increase the efficiency of our State institutions.

POSSIBLY the improved health of our community during the past year, especially among young men, is owing, in part at least, to the constant increasing attention given to athletic exercises and sports. The new Manhattan Athletic Club recently erected at a cost of over a million of dollars, furnishes, in its unequalled advantages for cleanliness and physical development, those facilities for healthy recreation, amusement and physical development which contribute so largely to the welfare of the State in making good citizens and building up happy homes. A healthy body, all its parts brought in harmonious relation by proper development, naturally leads to a healthy brain and a clear and vigorous intellect. It is true athletic training may be carried to excess in this, that one organ may be developed at the expense of the rest; but there is no such danger in a club of cultured men, where only the most scientific teachers are employed and where the object is pleasure and health. If a club modeled on the principle of the great athletic clubs of this city was started in every large town and city in this country, the physicians and the law courts would have less to do, and our literature and trained labor would show an increased efficacy and strength.

THE *British Medical Journal* remarks concerning Oliver Wendell Holmes, who celebrated his eighty-first birthday on August 29, that he is still one of the most vivacious of men; age can not wither the freshness of his interest in life, nor deaden the cheerful sparkle of his style. Even of crabbéd age and the inevitable sorrows and bereavements which it brings with it he writes with an easy wit, quite untinged with cynicism, which *circum præcordia ludit* and brightens the dismal subject so as to make it amusing even to his fellow-sufferers. From the purely medical point of view his account of his mode of life is instructive as well as interesting. For a long time

back, he says, he has taken extreme care of himself. Never robust, he was still wiry in his earlier and maturer life; but since he reached the age of eighty his hygienic vigilance is unceasing. The rooms which he daily occupies are equipped with barometers, thermometers, aerometers—with every kind of instrument, in short, to prevent his incurring the slightest risk of taking cold. As pneumonia is the deadliest foe of old age, he does his utmost to keep it at a distance. He never gets up during winter until he knows the exact temperature, or takes his bath without having the water accurately tested. He lives by rule, and the rule is inflexible. His time is scrupulously divided—so much allotted to reading, so much to writing, so much to exercise, so much to recreation. His meals are studies of prudence and digestion. He understands the specific qualities of all ordinary foods, and never departs from the severest discretion in eating. To this strict hygienic discipline Dr. Holmes attributes his good health and the retention of his mental vigor.

THE *Medical Advance*, a journal which advocates and insists upon dogmatic medicine, denies the fact that the whole of medicine is not taught in sectarian colleges, and asks for proof. Our evidence in the case was obtained from students and graduates of homœopathic colleges, who ought to know whereof they affirm! These same gentlemen also said they were not satisfied with their sectarian diploma, by which they found themselves handicapped in the very outset of their professional career. It is a significant fact that ten members of the faculty of a homœopathic college in this vicinity are graduates of non-homœopathic colleges!

EVERY year brings us a dozen new specifics for diphtheria, all of which fail except in occasional cases, which must be carefully individualized by the physician. The latest cure comes from Dr. Zenecko, of Nigni-Nogorod, which, from the well-known action of the drug, is worth a trial. Twenty-one cases of diphtheretic angina is reported in which the use of *iodide of potassium* resulted in rapid recovery. The iodide is given to adults in doses of from four and a half to seven and a half grains, making from thirty to sixty grains a day. In children from a half grain to a grain is given, in both cases until iodism is produced. The membrane usually becomes detached from the second to the fourth day. If the heart becomes feeble, stimulants are freely used. The throat is gargled or sprayed with bland liquids, such as tincture of geranium or phytolacca, two

or three per cent. solution of boric or salicylic acid and also with glycerine. The swollen cervical and submaxillary glands are treated with inunction of mercurial ointment, and tonic doses of china or quinine are prescribed after the acute stage has passed.

The bichromate of potash has long been a favorite remedy in our school in croupous and diphtheretic conditions, but in our hands better results have often been obtained with the iodide or bromide of potash.

It is to be hoped the same scientific energy, which has opened such brilliant prospects for the successful treatment of tuberculosis, may soon throw some light upon a disease so terrible in its ravages.

DR. CARROLL DUNHAM, son of the late Carroll Dunham, M. D., for a long time Professor of Materia Medica, etc., in the New York Homœopathic Medical College, according to the *Medical Register* of the United States, is a graduate of the said homœopathic college of the year 1880, and of Bellevue Hospital Medical College of 1887, and is registered as a "regular" physician residing at Irvington, N. Y. We are informed that Dr. E. K. Dunham, another son of the late Dr. Carroll Dunham, is also a "regular" physician! We are told that several sons of the late Dr. Berens, a homœopathic physician of Philadelphia, are in the "regular" school! The list could be extended! It certainly looks as if these gentlemen were not satisfied that homœopathic colleges in general teach the whole of medicine.

THE HOMŒOPATHIST—WHAT IS HE AND WHAT IS TO BECOME OF HIM?

THE Kansas City *Medical Index* says: There are three classes of men to-day practicing under diplomas of homœopathic colleges:

The first class embraces those who are conscientious, and are sticking to the old-fashioned homœopathy—the law of *similia similibus curantur*, as applied by high attenuations, or "potencies." These are deluded men, curing those cases which would naturally recover under the *vis medicatrix nature*, and losing many patients whose lives might be saved by the application of rational therapeutics. This class constitutes what may be called "high dilutionists," rapidly diminishing, soon to be a thing of the recent past, like the dodo and the Tasmanian.

The second class includes that vastly larger array of men who are not conscientious; they see the absurdity of the "high-potency" theory, and never put it to use; they cling more or less tenaciously to the law of *similia* in their therapeutics—professedly—but give, in great part, the same remedies that we do, however distant these may be from the rules of homœopathic lines of treatment; notably do they administer such things as antipyrine, bromidia,

tongaline, celerina, Tarrant's seltzer aperient, and other like patent or proprietary articles, as far from homœopathic remedies as is from the earth the remotest nebula which marks the marginal dawn of non-existing worlds. Leading homœopathic journals, like *The Hahnemannian* and *The Clinical Reporter*, are filled to the brim with advertisements of these articles. Men of this class are not true homœopaths—they use the name "Homœopath" for the prestige it gives them in some places. These are the men who have rendered the school so obnoxious to Regulars; they are the "quacks" of homœopathy, and the men who, by their disreputable methods, have caused all practitioners in their school to be classed among "irregulars."

The third class is rapidly increasing in numbers. It consists of men who, like the first class, are really conscientious—but more, they are educated. They are the men who have insisted that all students shall take three full courses of lectures prior to graduation, and who have made this a necessity by the action of their National Association—something the managers of the American Medical Association have not done, for reasons best left unsaid. They are really scientific physicians; cultured; progressive; they see the error of attempting to practice by any exclusive rule or dogma, and use everything that experience has shown to be curative; many of them have dropped the distinctive title altogether, and call themselves simply "physicians." Not long since the *Medical Era* (and its Hahnemannian orthodoxy is unquestioned) said: "Wonderful as it is, homœopathic law does not cover everything. The fact is, it is applicable to a very small part of the great field of medicine. Our opponents have been quicker to see this than some of our number, and hence they have been very anxious to pin us down to the idea that all medicine is covered by our law, knowing that if they could do so we would be doomed as a school."

No, brother editor, it is just this admission which will doom your school. The now-beginning dawn of rational therapeutics must see a decadence of *all*, and the fruition of our hopes of the medication of the future must be the extinction of all "schools." Scientific investigation is rapidly doing what ridicule (and worse—abuse) has hitherto failed to do.

Now what can be done to hasten this desirable end—the joining of all true progressive men in one grand body to be known only by the name physicians? In the first place, the regular colleges must require three full courses of lectures, and then admit students who have been matriculates of Hahnemannian schools upon an equal footing with others. More than this, they should *invite* graduates of those schools to take the *ad eundem* degree in order that they may join any regular medical society, and thus become better, broader men; as it is, no society in this country will admit a graduate of an Eclectic or Homœopathic college, even though he has abandoned his distinctive title and proclaimed himself simply a physician; and this bar to membership has held many good men out of society work and made them bitter, narrow and non-progressive.

In the second place, concessions must be made upon both sides; thus far the most have come from the other side, as in the change of the *New York Medical Times* from "a journal for homœopaths" to "a journal for physicians," with the advice from its learned editor, Dr. Egbert Guernsey, to all graduates of homœopathic colleges to drop the name "homœopath" entirely; and as in

the late announcement of the Cleveland Homœopathic Medical College that hereafter the United States Dispensatory will be used as a text-book, and that the lectures upon materia medica will include all the principal drugs given in it!

Something has been done by our own side, however; thus the hostility of the average doctor to the disciple of Hahnemann is not half so pronounced as was the case a decade ago, as is evidenced by the promptness with which certain prominent surgeons of this city respond to the call to operate for homœopathic practitioners; again, the rapid increase of "New Code" men, even outside of New York, is significant of a change; so, too, is the fact that many post-graduate schools admit graduates of Hahnemann colleges, and still more is the fact that an ex-President of the American Medical Association has openly avowed his practice of consulting with all legally-qualified practitioners whether "regular," "homœopathic" or "eclectic," and absolutely no notice of it has been taken by that Association!

But even more may be done. It should be the duty of every teacher of therapeutics to carefully select the good things of homœopathy as well as of eclecticism and present them to his students. This may not be practicable at this time, but it will become so at no remote date; for we are becoming *honest* in our investigations, and we can not deny that we have gained much by the work done by homœopaths, e. g., we have learned to discard the name "allopath"—the word is now rejected, and we call ourselves simply physicians; we have learned that there may be some truth in the application of the *similimum*—indeed, there are many "regulars" in this city who to-day prescribe homœopathic remedies, and frequently; better than this we have learned from the homœopathist to look more closely at the symptoms present in a particular case, and by means of "specific medication" (derived in great part from the "Eclectics") to combat those symptoms before they become dangerous; and still better we have learned simplicity in the administration of drugs; one of the rules of homœopathy is "the single remedy"—we have been giving too much medicine, and were centuries in recognizing it. But polypharmacy is giving way to the rational therapeutical application of remedies—the draughts and potions, the nauseous pills and bitter solutions are being superseded by simpler, pleasanter and more efficacious methods of drug administration.

If this tendency toward liberalism continues, homœopathy will soon vanish from earth (and Eclecticism will go simultaneously). There can be no doubt of this—the handwriting is on the wall, and the obliteration will be by the broadening process.

WE reproduce with pleasure Bro. Lanphear's answer to the question which heads this article. On the whole it is truthful, just, shows a good knowledge of the position of the respective parties to the controversy and is far in advance of any article from a similar source, as to the common ground upon which we can all meet. This gives us hope!

Dr. Lanphear is in error when he says "no society in this country will admit a graduate of an eclectic or homœopathic college, even though he has abandoned his distinctive title and pro-

claimed himself simply a physician," because under the laws of *this State*, county societies are bound to admit graduates of colleges within the State, even if they are sectarian.

The code of ethics, however, will prevent the use of any title by its members other than physician, and if they are willing to abide by this code they will be admitted. There is a by-law in the N. Y. Co. Society requiring renunciation in writing of belief and practice of candidates who have been known as sectarians, but we believe the by-law to be unconstitutional, and it is certainly not in accord with the spirit of the age. It should be repealed!

The "regular" colleges should teach all that is good in the sects, thus becoming truly *eclectic*, and leave sects no reason for existence. There should be but one school in medicine, but that ought to be broad enough to hold all, regardless of individual opinion. Medical union can be accomplished only by absorption or "by the broadening process," as there is much in the sects that has come to stay.—Eds.

THE SECRET DISCLOSED.

PROF. KOCH has at last broken the silence he has so long maintained in reference to the new treatment which has created such intense excitement throughout the world and aroused the hope that at last a remedy has been found for the early diagnosis and cure of tuberculosis, which, in its various forms, yearly removes from this world more than a million of its inhabitants. Whether the expectation will be realized remains to be seen. It is evident that Pasteur and Koch, in their minute and painstaking scientific investigations, have reached by different paths the same therapeutic principle which Hahnemann demonstrated nearly a century ago, and through which the great advances in medicine during the past century have been secured.

In reviewing the action of his remedy as gathered from the experiences of those to whom he has given the fluid, and the one hundred and fifty cases which have come directly under his own observation, Dr. Koch says that all the information thus obtained coincides with his first observations, and that there is nothing to modify in what he has before reported.

Dr. Koch's description of the remedy itself and the manner in which he arrived at the discovery presents the whole subject in so clear a light that we give it in his words. There can be no doubt that we have an agent of such immense power that the pathological conditions of the patient must be carefully studied before its administration. Already one death of tubercular meningitis, in a child in this city, has been recorded after inoculation:

"If a healthy guinea-pig be inoculated with the pure cultivation of German kultur of tubercle bacilli, the wound caused by the inoculation mostly closes over with a sticky matter and appears, in its early days, to heal. Only after ten to fourteen days a hard nodule presents itself, which, soon breaking, forms an ulcerating sore, which continues until the animal dies.

"Quite a different condition of things occurs when a guinea-pig already suffering from tuberculosis is inoculated. An animal successfully inoculated from four to six weeks before is best adapted for this purpose. In such an animal the small indentation assumes the same sticky covering at the beginning, but no nodule forms. On the contrary, on the day following or the second day after the inoculation, the place where the lymph is injected shows a strange change. It becomes hard and assumes a darker coloring, which is not confined to the inoculation spot, but spreads to the neighboring parts until it attains a diameter of from .05 to 1 centimetre. In a few days it becomes more and more manifest that the skin thus charged is necrotic, finally falling off, leaving a flat ulceration, which usually heals rapidly and permanently without any cutting into the adjacent lymphatic glands. Thus the injected tubercular bacilli affect quite differently the skin of a healthy guinea-pig from one affected with tuberculosis.

"This effect is not exclusively produced with living tubercular bacilli, but is also observed with the dead bacilli, the result being the same whether, as I discovered by experiments at the outset, the bacilli are killed by a somewhat prolonged application of a low temperature or boiling heat, or by means of certain chemicals. This peculiar fact I followed up in all directions, and this further result was obtained—that killed pure cultivations of tubercular bacilli, after rinsing in water, might be injected in great quantities under healthy guinea-pigs' skin without any effect occurring beyond local suppuration."

Prof. Koch here interpolates a note that such injections belong to the simplest and surest means of producing suppuration free from living bacteria. He adds:

"Tuberculous guinea-pigs, on the other hand, are killed by the injection of very small quantities of such diluted cultivations. In fact, within six to forty-eight hours, according to the strength of the dose, an injection which is not sufficient to produce the death of the animal may cause extended necrosis to the skin in the vicinity of the place of injection. If the dilution is still further diluted until it is scarcely visibly clouded, the animals inoculated remain alive and a noticeable improvement in their condition soon supervenes. If the injections are continued at intervals of from one to two days, the ulcerating inoculation wound becomes smaller, and finally scars over, which otherwise it never does; the size of the swollen lymphatic glands is reduced, the body becomes better nourished, and the morbid process ceases, unless it has gone too far, in which case the animal perishes from exhaustion.

"By this means the basis of a curative process against tuberculosis was established. Against the practical application of such dilutions of dead tubercle bacilli there presented itself the fact that the tubercle bacilli are not absorbed at the inoculation points nor do they disappear in another way, but for a long time remain unchanged and engender greater or smaller suppurative foci. Anything, therefore, intended to exercise a healing effect on the tuberculous process must be a soluble substance which would be lixiviated to a certain extent by the fluids of the body floating around the tubercle bacilli and be transferred in a fairly rapid manner to the juices of the body, while the substance producing suppuration apparently remains behind in the tubercular bacilli, or dissolves but very slowly. The only important point was, therefore, to induce outside the body the process going on inside, if possible, and to extract from the tubercular bacilli alone the curative substance.

"This demanded time and toil, until I finally succeeded with the aid of a forty to fifty per cent. solution of glycerine in obtaining an effective substance from the tubercular bacilli. With the fluid so obtained I made further experiments on animals and finally on human beings. These fluids were given to other physicians to enable them to

repeat the experiments. The remedy which is used in the new treatment consists of a glycerine extract, derived from the pure cultivation of tubercle bacilli. Into the simple extract there naturally passes from the tubercular bacilli, besides the effective substance, all the other matter soluble in fifty per cent. glycerine. Consequently, it contains a certain quantity of mineral salts, coloring substances, and other unknown extractive matter. Some of these substances can be removed from it tolerably easily. The effective substance is insoluble in absolute alcohol. It can be precipitated by it, though not, indeed, in a pure condition, but still combined with the other extractive matter. It is likewise insoluble in alcohol. The coloring matter may also be removed, rendering it possible to obtain from the extract a colorless dry substance containing the effective principle in a much more concentrated form than the original glycerine solutions. For application in practice this purification of the glycerine extract offers no advantage, because the substances so eliminated are unessential for the human organism. The process of purification would make the cost of the remedy unnecessarily high.

"Regarding the constitution of the more effective substances, only surmises can for the present be expressed. It appears to me to be derivative from albuminous bodies having a close affinity to them. It does not belong to the group of so-called tox-albumens, because it bears high temperatures and in the dialyser goes easily and quickly through the membrane. The proportion of the substance in the extract to all appearance is very small. It is estimated at fractions of one per cent., which, if correct, we should have to do with a matter whose effect upon organisms attacked with tuberculosis goes far beyond what is known to us of the strongest drugs.

"Regarding the manner in which the specific action of the remedy on tuberculous tissue is to be represented, various hypotheses may naturally be put forward. Without wishing to affirm that my view affords the best explanation, I represent the process myself in the following manner: The tubercle bacilli produced when growing in living tissues the same as in artificial cultivations contain certain substances which variously and notably unfavorably influence living elements in their vicinity. Among these is a substance which in a certain degree of concentration kills or so alters living protoplasm that it passes into a condition that Weigert describes as coagulation necrosis. In tissue thus become necrotic the bacillus finds such unfavorable conditions of nourishment that it can grow no more, and sometimes dies. This explains the remarkable phenomenon that in organs newly attacked with tuberculosis, for instance, in guinea-pigs' spleen and liver, which then are covered with gray nodules, numbers of bacilli are found, whereas they are rare or wholly absent when the enormously enlarged spleen consists almost entirely of whitish substance in a condition of coagulation necrosis such as is often found in cases of natural death in tuberculous guinea-pigs. The single bacillus can not, therefore, induce necrosis at a great distance, for as soon as necrosis attains a certain extension the growth of the bacillus subsides, and therewith the production of the necrotizing substance. A kind of reciprocal compensation thus occurs, causing the vegetation of isolated bacilli to remain so extraordinarily restricted, as, for instance, in lupus and scrofulous glands.

In the discussion before the Medical Association yesterday, Dr. Gutman followed Prof. Virchow. He said a dozen cases now under his treatment were nearly cured, and he argued that the adverse results in various cases reported by Prof. Virchow and others merely showed that the lymph should only be used in the early stage of the disease. In such cases, the necrosis generally extends only to a part of the cells, which then, with further growth, assumes the peculiar form of *riesen zelle*, or giant cell.

"Thus, in this interpretation, follow, first, the explanation Weigert gives of the production of giant cells. If one

increased artificially in the vicinity of the bacillus the amount of necrotizing substance in the tissue, the necrosis would spread a greater distance. The conditions of nourishment for the bacillus would thereby become more unfavorable than usual. In the first place the tissue which had become necrotic over a larger extent would decay and detach itself, and where such were possible would carry off the enclosed bacilli and eject them outwardly, so far disturbing their vegetation that they would much more speedily be killed than under ordinary circumstances. It is in such changes that the effect of the remedy appears to consist. It contains a certain quantity of necrotizing substance, a correspondingly large dose of which injures certain tissue elements even in a healthy person, and perhaps the white blood corpuscles or adjacent cells, thereby producing fever and a complication of symptoms, whereas with tuberculous patients a much smaller quantity suffices to induce at certain places."

DRS. VON SCHWEINETZ and Gay, of Washington, D. C., claim they are making experiments with a chemical substance recently discovered by them which they believe will demonstrate its power to control or prevent diphtheria in man.

GOV. HILL recommends for the second time, in his annual message, the abolition of the State Board of Charities and State Board of Health and filling the place of each with one man. The governor thinks one responsible person will do more and better work than with the large boards as at present operated.

DURING the past year 231 patients were admitted to the Hahnemann Hospital, of which thirty-five remain under treatment at the close of the year. Cured, 124; improved, 81; unimproved, 9; dead, 10.

BIBLIOGRAPHICAL.

? **QUIZ-COMPENDS?** No. 14. A Compend of Diseases of Children. Especially Adapted for the Use of Medical Students. By Marcus P. Hatfield, A. M., M. D., Professor of Diseases of Children, Chicago Medical College, Physician to Wesley Hospital, etc. With a Colored Plate. Philadelphia: P. Blakiston, Son & Co., 1890, pp. 185, 12mo.

These little books contain the A. B. C's of the subjects of which they treat respectively, and may be of the greatest service to the student.

THE DISPOSAL OF HOUSEHOLD WASTES. A Discussion of the best Methods of Treatment of the Sewage of Farm-houses, Isolated Country Houses, Suburban Dwellings, Houses in Villages and Smaller Towns, and of Larger Institutions, such as Hospitals, Asylums, Hotels, Prisons, Colleges, etc., and of the Modes of Removal and Disposal of Garbage, Ashes and other Solid House Refuse. By Wm. Paul Gerhard, C. E., Consulting Engineer for Sanitary Works, New York City. New York: D. Van Nostrand Company, 1890.

Mr. Gerhard is an authority on all subjects of engineering and sanitary work, and should be consulted by those who may require his services.

BEENINGHAUSEN'S THERAPEUTIC POCKET-BOOK, FOR HOMOEOPATHIC PHYSICIANS TO USE AT THE BEDSIDE AND IN THE STUDY OF THE MATERIA MEDICA. A New American Edition. By Dr. Timothy Field Allen. Philadelphia: The Hahnemann Publishing House, 1891, pp. 484, 12mo. Price \$4.

This book is sufficiently well-known to require merely a notice of the issue of an edition. The editor says that "the additions surpass in number the remedies contained in the original," and we are quite willing to accept his word for it.

Those physicians who require such aid as may be found in works of this class will doubtless be glad to avail themselves of the opportunity to procure a copy of a work which has been so long out of print.

AN ILLUSTRATED ENCYCLOPÆDIO MEDICAL DICTIONARY. Being a Dictionary of the Technical Terms used by Writers of Medicine and the Collateral Science in the Latin, English, French and German Languages. By Frank Foster, M. D. With the Collaboration of a Large Number of Assistants. Vol. II. With Illustrations. New York: D. Appleton & Co.

The second volume of this magnificent work extends from C to F, and shows the same completeness in all its details as that which characterized the first volume. Since the first volume was issued we have so often had occasion to refer to it in our professional and editorial work and always with such satisfaction as to leave nothing wanted in the origin, meaning and pronunciation of the word. Covering as it does all the departments of medicine and the collateral sciences this encyclopedic dictionary will be almost as necessary in the office of the newspaper editor and the general scientist as in that of the physician.

THE STRUCTURE OF THE CENTRAL NERVOUS SYSTEM. By Dr. Ludwig Edinger. Translated by Willis Hall Vatum, M. D., and Edited by C. Eugene Riggs, A. M., M. D. Philadelphia: F. A. Davis, Publisher.

The second edition of Dr. Edinger's most important work has been, in many of its chapters, entirely rewritten, so great has been the advance in knowledge of the nervous structures during the past few years. The author has given, in a clear but condensed form, an admirable résumé of the researches of the ablest pathologists in Europe and America in regard to the finer structure of the brain, illustrating the several points with diagrams. A careful study of the work will aid materially in the localization of brain diseases. As in all brain trouble so much depends upon accurate diagnosis, the clear picture and concise description of the various parts of the brain and their specific functions will be welcome to every physician.

THE PHARMACOLOGY OF THE NEWER MATERIA MEDICA. Part IX. Euphorbia pil.—Grindelia. Detroit, Mich.: Geo. S. Davis.

THE EIGHTH ANNUAL REPORT OF THE N. Y. SKIN AND CANCER HOSPITAL presents the results of an admirably efficient work in these specialties, 1,821 new cases having been treated during the year.

The *Scientific American*, published by Munn & Co., New York, during forty-five years, is, beyond all question, the leading paper relating to science, mechanics and inventions published on this continent. Each weekly issue presents the latest scientific topics in an interesting and reliable manner, accompanied with engravings prepared expressly to demonstrate the subjects. The *Scientific American* is invaluable to every person desiring to keep pace with the inventions and discoveries of the day.

NEW YORK CHARITIES DIRECTORY. Containing a classified and descriptive directory of the charitable and benevolent societies and institutions of the city of New York, can be had at 21 University Place. Price, \$1.00.

INTERNATIONAL MEDICAL ANNUAL. E. B. Treat, 5 Cooper Union, announces the publication, early in the year, of the ninth yearly volume of the annual which, from its admirable and compact condensation of the facts from the medical literature of the world, has made it a necessity for the physicians' library. The fact that the volumes of this series requires an edition of over 13,000 copies to meet the demand shows that it fully meets a great medical want.

We can imagine nothing more beautiful than the calendar "All Around the Year," issued by Lee & Shepard. It forms a small volume, bound together with rings, each page containing the calendar for the month and illustrated by an exquisite engraving.

The second instalment of the "Talleyrand Memoirs," to be published in the February Century, will be devoted entirely to Talleyrand's narration of his personal relations with Napoleon Bonaparte. Talleyrand apologizes for taking office under the Directory, describes his first meeting with Bonaparte, tells how the First Consul snubbed an old acquaintance, and relates other anecdotes of Napoleon tending to emphasize the weaknesses and vanities of the emperor. Talleyrand criticizes Napoleon's Spanish policy, and gives a detailed account (from notes which he had taken of the conversation) of an interview that Napoleon had at Erfurt with Goethe and Wieland.

A magazine sold. *College and School* becomes *The Louis Lombard*. Mr. F. G. Barry has sold his monthly magazine, *College and School*, to Louis Lombard, of Utica, N. Y. The next number will appear February 15, entitled *The Louis Lombard*, with a guaranteed circulation of 5,000 copies, and a long list of contributors.

CORRESPONDENCE.

PROPOSED MEDICAL EXAMINER'S BILL IN PENNSYLVANIA.

Medical legislation in Pennsylvania is in an unsettled condition. At the last meeting of the Legislature the Medical Examiner's bill was defeated through the active efforts of the New School. In anticipation of renewed efforts for its passage this year, the New School will offer a substitution measure entitled "An act to establish a State Board of Medical Education." This board is to consist of nine members to be selected equally from three lists of ten names submitted by the State medical societies "to the intent that the three systems of medicine, homœopathic, allopathic and eclectic, be equally represented thereon."

The duty of the board is to regulate the extent and character of the preliminary education to be required of all medical students; to fix the minimum curriculum of studies in medical colleges, provided that the course shall be not less than four years, which shall include three years of lectures. Each graduate of colleges as upon evidence of the dean, has conformed to the requirements of the board, shall receive a certificate entitling him to register in any county of the State.

Graduates of other colleges whose standing is approved by the board receive a similar certificate allowing them to practice, but if from colleges of a lower standing they

must first pass an examination which shall apply to their preliminary education as well as medical knowledge.

Should the board discover after the passage of the act, that any medical college has granted the degree to any one deficient either in preliminary or final examination it shall proceed against such college for infringement of the law. The penalty for the first offense is a fine, and for a second offense a fine and the certificate withheld from future graduates except upon examination before the board. In conviction for a third offense the charter of said college shall be annulled.

It is difficult to see what advantage this bill has over a fair Medical Examiner's bill. Both admit the principle of outside interference with the right of college faculties to decide who shall enter upon the practice of medicine. The Medical Education bill does this by prescribing the curriculum and then approving the work of colleges living up to it. The Medical Examiner's bill does it by requiring a final examination of all graduates before they shall be allowed to practice in the State. The latter method is the simpler one, and makes no discrimination in favor of medical colleges located in the State, and is similar to the methods adopted by the profession in other States.

It would be difficult for the Board of Medical Education to decide that other medical colleges in the United States were living up to its standards, because even in Pennsylvania, to make sure of this fact, part of section 6 provides that "the board shall delegate one or more of their number, who from time to time shall make an inspection of the methods of instruction employed and the facilities for teaching, in each such medical college and annually report the same to the board."

The New School bill by removing the fear of another examination from all who graduate at colleges in the State, legislates for the colleges rather than for the profession at large, because they would attract more students by holding out as an inducement the freedom of practice in Pennsylvania to all their graduates, and it is very probable that a larger number of the latter would enter the already overcrowded ranks of the profession in that State.

Let Pennsylvania pass a Medical Examiner's bill that is fair to the whole profession of that State, and when the remaining States have done likewise, then let us have a National Board which shall prescribe a uniform examination for all graduates in medicine (this was first suggested by Prof. Osler of John Hopkins), so that having passed the examination in Pennsylvania, the certificate of that examining board shall be accepted by every other State as granting the right to practice medicine.

TRANSLATIONS, GLEANINGS, ETC.

Simple Method for Controlling Epistaxis.—Dr. W. W. Parker, of Richmond, Va., says, in the *New York Medical Record*, October 4th, 1890: The plan of arresting hemorrhage from the nose, which I here describe, I have used for thirty years without one failure. When I first began to practice I used Bellocq's instrument, but found it painful, and, in small children, exceedingly troublesome of application. . . . The little device which I use is made of fifteen of the long threads of patent lint, size three and one-half, or four inches long, which I double on themselves and tie in the middle, and let one end of the string be six or eight inches long so as to pull the plug out when necessary. When doubled on itself it looks like a "comet" in miniature, with a nucleus and thirty tails or twice the number of threads used. A probe is pressed up against the center, and is passed back upon the floor of the nasal cavity and pushed on till you reach the posterior nares. This will be known both by the resistance and the length of the probe, or the depth which you have reached. Then slowly with-

draw the probe and plug the anterior nares and you have arrested the bleeding. These twenty or thirty ends floating in the blood at once coagulate it. The passage of the soft lint gives no pain whatever. If lint is not at hand I use the largest size spool cotton. The plug is removed in from twenty-four to forty-eight hours. It gives no pain and the patient is willing for it to remain. The other methods are all painful in execution, and the discomfort, while the plug remains, is very considerable.

Chronic Nasal and Pharyngeal Catarrh Caused by Arsenic.—Dr. Donald W. C. Hood reports the following case in the *Lancet*, March 15th, 1890, page 595: On July 23, 1889, a gentleman, aged 42, consulted him for a "cold in the head," which had been more or less constant since the previous March. There were no other symptoms of illness; lungs, heart and urine normal. The catarrh was worse in the morning, and was then accompanied with a slight cough; the throat was not sore, but was complained of as being uncomfortable. The mucous membrane was injected, and perhaps a little swollen. There was nothing in the nares to account for the symptoms. The patient was sent to the sea-side to obtain complete rest and a thorough change. After two months he was perfectly well, but the cold in the head was as bad, if not worse, than at his first visit to Dr. Hood. Suspicions as to arsenic being the exciting cause were aroused. It was evident that if arsenic was producing this constant catarrh it was not to be looked for in the London house, but was to be sought for in something of frequent, if not daily, use. On inquiry it was found that early in the preceding March the patient, suffering from premature baldness, had consulted a hair-doctor, and had been given a hair-wash which had been used up to that time (August), being applied, and allowed to dry on. The catarrhal symptoms commenced about a fortnight after first using the wash, and had remained without any intermission up to the end of August. The hair-wash was examined, and found to be heavily charged with arsenic. Within a few days of leaving off this pernicious application, the catarrhal symptoms began to abate, gradually ceased, and have not again returned. It is worthy of note that, in this case, if the symptoms were produced by arsenic—and of this there can be but little doubt—the poison was absorbed from an unbroken skin, and caused no irritation of skin, stomach, or bowel.

Influence of Food upon the Composition of Human Milk.—This subject, hitherto very imperfectly understood, has been investigated by Zaleski (*Union Med. De Canada*), who arrives at the following conclusions:

1. A milk which is too rich in fatty ingredients may be exceedingly injurious to the child.
2. A plentiful supply of highly albuminous nourishment greatly increases the amount of fat in the milk; it lessens the quantity of lactose, but has little effect upon the other elements.
3. By attention to diet and regimen we may obtain, up to a certain point, the milk-composition suited to any particular infant.
4. The quality of the food exerts as marked an influence upon the composition of the milk in man as in other animals.
5. The fatty materials are formed, most probably, either directly or indirectly, from the albuminous elements of the food.

Why the Stomach does not Digest Itself.—Dr. E. Sehrwald, Docent in Jena, comes to the following important conclusions (*Munch. Med. Woch.*):

1. The balance between the alkali of the blood and the acid of the gastric juice does not follow, during life, the law of diffusion, but moves in narrower limits.

2. The self-digestion of the stomach is partly prevented by the alkalinity of the blood and partly by cell-action.

3. The living epithelium interposed between the blood and the gastric juice prevents their mutual neutralization and preserves the alkalinity of the blood and the acidity of the gastric juice.

4. By this protection the stomach is spared a great deal of work of secretion and absorption.

5. The protection furnished by the flowing blood is partly due to its alkalinity and partly to its properties as a nutritive liquid.

6. All influences which arrest the nutrition of the cells of the walls of the stomach, may lead to self-digestion and ulceration; and the conditions which may be mentioned in this connection are, first, disturbances in the circulation; second, direct injury to the epithelium, and, third, injuries of the trophic nerves.

American Academy of Medicine.—The Academy, at its annual meeting, held at Philadelphia, manifested additional and practical evidence of its continued interest in the subject of liberal preparatory education of students in medicine. It showed active work, also, in the cause of higher medical education.

Acting upon a recommendation in the president's annual address, the Academy voted to confine its efforts in future exclusively to its missionary work. Other medical organizations have become so numerous since the Academy was established that ample opportunity is afforded elsewhere for the presentation of all papers on purely medical subjects. This action on the part of the Academy makes it the only medical body in this country devoted exclusively to medical missionary work. It thus acquires a distinctive character.

Beginning its efforts at the foundation for profitable medical study,—proper preliminary mental training,—it has outlined a curriculum of study which it advises as qualifying to begin the study of medicine. One of its committees has been investigating the curricula of the different literary colleges of the United States, with a view to ascertaining their relative advantages and the comparative value of the literary degrees which those colleges confer. A report made by this committee at the Academy's recent meeting showed great differences in both respects.

Other committees report, from year to year, upon subjects connected with preliminary and medical education—such as the amount of preparatory mental discipline required by the different medical colleges for matriculation of students of medicine, and their methods of determining that fact. Another committee reports each year upon the laws of the different States to determine the qualifications, professional and otherwise, of candidates for license to practice medicine where such laws exist—including the standard adopted by those States, the method of ascertaining the qualifications of applicants, the mode of enforcing the laws, requirements, penalties for violations and kindred subjects.

Having thus begun by judicious encouragement to young men to pursue such preparatory courses, and seeking to give reliable direction in their medical study, and evincing appreciation of the medical colleges which afford the best facilities for their students, the Academy, in accordance with another of the president's recommendations, decided to take an additional step in advance. It will endeavor to secure, through its Fellows resident in the different States coöperation of the medical organizations of each State looking to legal enactments of all of the States to regulate the practice of medicine by granting, hereafter, licenses to practice only on examination, and regardless of the possession of diplomas issued by medical colleges. Such enactments have a two-fold effect: They make colleges, in effect, simply teaching bodies—which is their proper function—and they secure in future, for the protection of the people, physi-

* Editorial from "The Journal of the American Medical Association," January 3, 1891.

clians who are required to demonstrate to the constituted authorities of the State their qualification for the work in which they are seeking to engage, and they expose the pretensions of the unqualified. Such legislation accomplishes, by enforcing its requirements, what the Academy has been seeking to effect by other means in the interest of scientific medicine, which means interest in the health and welfare of the people of the States. Thus it becomes an instrument for conserving the material interests of the States themselves.

It is an encouraging feature of the times that some six hundred of those who are recognized as being amongst the most liberally educated of the physicians of our country are united in a voluntary effort, and proceeding, at their own expense, in an unostentatious and systematic manner in an effort to remedy recognized educational defects, and thus to elevate the profession of medicine, thereby benefiting mankind.

In such an unobtrusive manner has much of the Academy's preliminary work been done that it has attracted comparatively little attention. What has been accomplished merits recognition and commendation. Its efforts are such as should receive the cordial and energetic support of the medical profession of the whole country. Well considered and just legislation in this regard in all of the States would prove advantageous to the public and creditable to the profession which advocated and aided it. Work having such objects in view commends itself to *The Journal*.

Medicines Among the Mongols (W. Woodville Rockhill, in *January Century*).—Medicines also are much sought after by them. While I was at Dulun-kuo nearly every one in the village came to see me, and most of the people asked for medicines whether they were suffering from any complaint or no. Plasters were in great demand, as all the villagers had rheumatism, and the tighter the plasters stuck the better they were held to be. I had with me a bottle of Eno's fruit salts, and tried to give some to the people, but when they saw the salts boiling and fizzing they thought there must be some magic about the medicine and would have none of it.

Most of their troubles, sores and eye diseases come from dirty habits, but one can never persuade them of the necessity of keeping clean. A friend of mine was once traveling among the Mongols, and an old crone came to him and begged some medicine to put on a sore. He told her that before applying the salve it would be necessary to wash herself. She gave it back to him, saying, "I am sixty-seven years old, and I have never washed in my life; do you suppose I am going to begin now?"

Mongol physicians feel the patient's pulse on both wrists at the same time, and never ask any questions; or at least none concerning the origin and progress of the complaint, for if they did it would be held that they had shown ignorance in their profession.

Sexual Life of Women after Castration.—At the Berlin Medical Congress, Dr. F. Keppler, of Venice (*Hosp. Gaz.*), read a paper embodying the results of a study he had made in the cases of ovariectomy performed by himself. He had performed castration forty-six times, obtaining a cure in thirty-nine. These operations were performed for the relief of purulent or gonorrhoeal salpingitis, oöphoritis, fibroid tumors of the uterus, etc. The following were his conclusions, derived from a study of the physiological consequences of these operations: 1. When the operation was performed on account of salpingitis or other inflammatory process, uterine hæmorrhage never occurred subsequently. 2. The conjugata became gradually shortened, and this was the more marked the younger the individual was when operated upon. 3. The uterus became atrophied, the vagina grew shorter and narrower, its mucous membrane

became paler, and the labia majora were somewhat thinned. 4. The breasts grew smaller, acquiring a strong resemblance to the male mammae. 5. The brown pigmentation of the nipple, areola, perineum, and anus disappeared wholly, as did also pathological pigmentation existing in some of the cases; the hair also turned white. 6. The tendency to embonpoint, which is generally believed to exist after these operations, was not observed by the author. 7. No changes were observed as regards the growth of the hair or the tone of the voice. 8. The sexual desire remained, and was the more pronounced the earlier in life the operation was performed. 9. The operation offers no impediment to marriage; three of the author's cases had married and had lived happily with their husbands for years. 10. A marriage with a castrated woman is the ideal Malthusian marriage, and the only way the Malthusian idea can be carried out without endangering the health and happiness of the woman. 11. In the cases operated upon in early life for inflammatory conditions, no neuroses were seen to develop, which was not the case when women were operated upon late in life for fibroid tumors of the uterus. 12. A favorable influence upon the hæmorrhage was observed after operations for myoma, yet in no case did the menopause at once set in. 13. In cases of operation for uterine fibroma, the patients, even those in full maturity, lost all sexual inclination after the operation.

Aristol is rapidly gaining fame in the class of cases for which iodoform has been so popular. Being a compound of iodine and thymol, it seems to combine the therapeutic action of both drugs and, being without any unpleasant odor or toxic effects, it is rapidly taking the place of iodoform in ulcerated surfaces and in catarrhal conditions of the womb and nose. In ulcerative catarrh it can be used with a powder blower or in the form of an ointment with vaseline. In lupus and psoriasis the action is excellent.

Treatment of Severe Pneumonia with Cold Baths.—While this method (*Le Prog. Med.*) should be for exceptional cases, yet it fills an important place in the treatment of this serious disease. Although the cold bath abstracts the heat, yet it is the effect upon the respiratory tract which must be considered. At the time of immersion the blood tension increases and the work of the heart augments; after the bath a reverse action takes place. The cold bath exercises upon the nervous system a marked stimulation, which is both tonic and sedative, and is shown by an increase in the energy of its functions. It increases the secretion, notably the urine, thus permitting the organism to rid itself not only of the residue of combustion, but also of the soluble poisons developed by the infectious microbes. The cold bath not only combats hyperthermia, but frees also the brain, lungs and heart and tones up the nerve's centers; it acts against infection in promoting the urinary secretion. But the organism must be in a condition to react. If the heart is altered in its texture, if innervation is defective, syncope and asphyxia are to be feared. Before applying the bath, the state of the heart, the presence of atheroma, the resistance of the nervous system must be noted. Baths are given every four hours, at first of 28° to 30° C. and then lowered to 22° and 18° C. if it is feared that reaction may not be prompt, otherwise they are given at 18° C. If the fever persists after the first baths, the temperature of the following ones are lowered.—T. M. S.

Dr. Geo. T. Stewart, chief of Staff, reports 758 patients treated at the W. I. Hospital during December, with a death rate of 2.11 per cent. For the year 4,108 patients were treated, with a death rate of 6.87 per cent.

MISCELLANY.

—Sir Morell Mackenzie, an acknowledged authority on laryngeal cancer (*Hosp. Gaz.*), recently imparted to his brethren of the "Laryngological and Rhinological Association" an item of practical information, which I hasten to communicate to my readers in the hope that it may come in handy just when something handy is a desideratum. The successful treatment of that alarming and dangerous condition, spasm of the glottis, is oftentimes difficult and uncertain, but Sir Morell tells us that by setting up a rival reflex, the laryngeal spasm, itself a reflex usually due to peripheral irritation, may be overcome *instantly*. All one has to do is to get the sufferer to take a pinch of snuff or pepper, or failing either condiment, to excite sneezing by tickling the mucous membrane of the nares. The immediate result is a paroxysm of sneezing, after which the patient sinks quietly back to sleep, breathing like a new-born infant. The treatment is logical as well as practical, and is well worth a trial.

—Mr. Yelverton Davenport, of Pimlico (*Hosp. Gaz.*), has excited a good deal of interest and curiosity by his courage in giving into charge a woman who had asked him to get her "out of trouble," to use the technical phraseology. I am disposed to admire Mr. Davenport for an act of moral courage which few medical men would be equal to. It can not be doubted that were his conduct more generally followed women would think twice before inciting medical men to violate the law. Recent stories from the States have put medical men on their guard against female journalists in search of sensational "copy," and it may be that Mr. Davenport had reason to suspect that he was being made the subject of a scheme to get him into a difficulty with the administrators of the law.

—Dr. Ferguson, in the *Medical Record*, recommends in those cases where there is a strong tendency to hemorrhage ten or fifteen drops every two or three hours of a mixture composed of one ounce each of alcohol and oil of turpentine to which is slowly added one ounce of sulphuric acid.

—Ointment for the Itch. Creolini, gr. viiss.; vaseline, 3 iss. M. Anoint the affected parts once daily.

—A Post-Graduate Medical College will shortly be established in Brooklyn.

—In a bill to regulate the practice of medicine, recently introduced in the Oregon legislature, there is a clause providing for the revocation of licenses for unprofessional conduct, which is defined in the bill as follows: First, the procuring, or aiding and abetting in procuring, a criminal abortion. Second, the employing of what are known as cappers or steerers. Third, the obtaining of any fee on the assurance that a manifestly incurable disease can be permanently cured. Fourth, the willful betraying of a professional secret. Fifth, all advertising of medical business in which untruthful and improbable statements are made. Sixth, all advertising of any medicine or of any means whereby the monthly periods of women can be regulated or the menses re-established if suppressed. Seventh, conviction of any offence involving moral turpitude. Eighth, habitual intemperance.

—In his examination of a portion of the meteorite that fell in Mighei, South Russia, M. Stanislas Meunier has discovered a salt which is soluble in water, and the presence of which has never before been detected in any meteoric stone. This salt, which crystallizes by evaporation of the aqueous solution, has reactions resembling those of the tellurates and arsenates. It is proved to be neither the one nor the other, however. Mayhap this is the key to the discovery of a new element.

—An extraordinary fact of great clinical interest was disclosed at a coroner's inquest held recently in England. A carman was injured through falling from his van, and died at the London Hospital. On making a post-mortem examination, Dr. J. Williams, the house-surgeon, found part of the blade of a knife protruding through the left side of the temporal bone about one inch. The brain was uninjured, the blade having passed between the convolutions of the brain. It must have been there a considerable time, as the bone had healed on the surface, and there were no marks on the skull. The lungs showed advanced phthisis, which was the cause of death. The coroner said that it was a most remarkable case and was very similar to one which came under his notice about two years ago, when he held an inquest on a young man who had lived for years with a steel penholder firmly imbedded in his brain.

—The Minnesota legislature has enacted a law punishing drunkenness, for the first offence with a fine of not less than \$10 nor more than \$40, or imprisonment for not less than ten nor more than forty days; for the second offence, a fine of not less than \$30 nor more than \$50, or imprisonment for not less than thirty days nor more than sixty; for the third and later offences, imprisonment for not less than sixty nor more than ninety days.

—Dr. J. Orne Green says that he has operated upon seventy-eight cases of meningitis from disease of the middle ear. Of these, sixty were cured, three not cured, seven died, two unknown, six unfinished.

—Analysis of Armour's meat extract (*Brit. Med. Journ.*) shows it to consist of 68 per cent. water, 20 nitrogenous extractives and 12 salts. This is a much greater proportion of water than is contained in Liebig's extract.

—A curious fashion has come into vogue in Paris. In all the cemeteries metal boxes with a slit in the lid are placed on the tombstones to receive the cards of visitors. The relatives of the deceased are thus enabled to see who among the living still cherish the memory of their departed friends.

—Edison says that thorough sulphur fumigation is effective against small-pox contagion, less so against scarlatina, and untrustworthy against diphtheria.

—The president of the British Association, Professor Flower, endorses Sir John Lubbock's idea that the field of inquiry is limitless, and that there may be fifty other senses as different from ours as sound is from sight; and even within the boundaries of our own senses there may be endless sounds which we cannot hear, and colors as different as red from green, of which we have no conception. These and a thousand other questions remain for solution. The familiar world which surrounds us may be a totally different place to other animals. To them it may be full of color which we cannot see, of music which we cannot hear, of sensations which we cannot conceive.

—The Hindoos use cobra-poison, in minute doses, as a remedy in the early stages of cholera. Kinyoun says the cobra-poison is a germicide of very high power, and is fatal to the development of cholera germs.

—The homœopaths in London are raising funds for the erection of a new hospital. The cost of this undertaking is estimated at 30,000 pounds, towards which a friend, well known to the hospital, gives 10,000 pounds. Mr. Alma Tedema, the artist, two of the sons of the late John Bright, and a number of other well-known people are named in the donation-list. Altogether close on to 20,000 pounds has been promised so far.

—Oliver Wendell Holmes says that his prescription for longevity is the acquisition of incurable disease.

—The weather has been so severe in England the past season as to raise the death rate to 30 per 1,000.